

Finding of No Significant Impact Rehabilitate Boulder Creek Trail and Campground

Olympic National Park
Clallam County, Washington
January, 2010

This Finding of No Significant Impact (FONSI) has been prepared, in accordance with the National Environmental Policy Act (NEPA), for the project to Rehabilitate Boulder Creek Trail and Campground and should be attached to the Rehabilitate Boulder Creek Trail and Campground Environmental Assessment (EA) dated December 18, 2009. This FONSI together with the EA and errata sheets constitutes a complete record of the conservation planning and environmental impact analysis process for this proposal.

The National Park Service (NPS) proposes to rehabilitate a 2.2 mile stretch of the Boulder Creek Trail and the Boulder Creek Campground within Olympic National Park (OLYM). These actions are identified in the park's 2008 General Management Plan (GMP) as goals for future management of the Elwha Area, and include:

- Retain road access to the Boulder Creek trailhead
- Improve the Boulder Creek trailhead and parking lot
- Rehabilitate the Boulder Creek Trail to provide access for hikers and pack stock users
- Maintain trail access that minimizes adverse effects on river processes and aquatic and riparian habitats to the extent possible
- Rehabilitate the historic Civilian Conservation Corps (CCC) campground [Boulder Creek Campground] at Olympic Hot Springs, with some sites removed and restored to natural conditions, and other sites retained to allow continued camping opportunities for backpackers.

Purpose and Need for the Boulder Creek Trail and Campground Rehabilitation Project

The purpose of the proposed action is to better protect park resources and provide for improved visitor access and enjoyment of the Boulder Creek trail and campground as identified in the GMP. This work is needed to address the following resource management and visitor experience concerns:

- The Boulder Creek trailhead does not provide adequate turnaround space for stock trailers or other large vehicles, nor does it provide adequate parking for visitors accessing the trail. This is resulting in impacts to the root systems of adjacent trees from vehicles being parked along the road shoulder after available spaces have filled.
- The Boulder Creek Trail is designated as a hiking and stock use trail, but is currently not suitable for stock use due to the hardened asphalt trail surface and absence of an

appropriate stock ford or crossing at Crystal Creek. Stock is unable to access the trail beyond Crystal Creek.

- The Boulder Creek Trail is located adjacent to designated wilderness (25 feet from centerline of the road). The current deteriorated asphalt trail surface is not consistent with the management of backcountry trails and detracts from visitor experience.
- The Boulder Creek Campground was identified through the Washington Park Wilderness Act of 1988 as a potential wilderness addition. This area is currently being impacted by trampling and the collection of firewood, resulting in the loss of vegetation and the expansion of bare ground and compacted soil. Additionally, obsolete infrastructure (concrete foundations, failed culverts) from the former automobile campground has altered the area's natural topography, water flow patterns, and vegetation. This is not consistent with the protection of wilderness character, and detracts from visitor experience.
- The formerly paved parking lot located adjacent to the Boulder Creek Campground at the end of the asphalt trail is no longer used by vehicles and is inconsistent with management of the area as backcountry. The presence of the leveled and compacted parking lot detracts from the visitor experience in this backcountry location, and prohibits the growth of native vegetation.
- The current trail and campground are not designed to meet visitor experience goals in a backcountry setting.

Selected Action

The selected action is a modified Alternative 4: Provide Enhanced Visitor Services, Active Revegetation, as described below. This alternative implements actions necessary to achieve project objectives while providing additional visitor services by expanding the parking lot at the Boulder Creek trailhead, installing bridges at the Cougar Creek and Crystal Creek stream crossings and a foot log and stock ford at Hell Creek to allow safe access for hikers and stock users. This alternative also provides additional visitor services at the Boulder Creek campground for backpackers and stock users.

The following changes were made to the management preferred alternative in response to public comments:

- The trailhead parking lot will be built to the size and capacity as described in Alternative 4. However, the park will surface the new parking lot with compacted gravel, rather than asphalt in order to minimize the potential for discharge of pollutants associated with asphalt paving.
- A stock high line system will be constructed in place of the proposed hitching rail at the new stock campsite to be built at the former automobile parking lot area near the Boulder Creek campground. This change is being made in order to more adequately accommodate pack stock during overnight stays. Hitching rails will be constructed at the new stock staging area at the trailhead parking lot and for day use near the Boulder Creek campground as described in the EA.

Sections of the trail and project area will be closed to public access until asphalt removal and all activity involving the use of heavy equipment is complete. The conceptual design for trailhead improvements and trail and campground rehabilitation may be modified during final design to best accommodate site-specific conditions and minimize resource impacts.

Boulder Creek Trailhead

The vehicle turnaround area will be expanded and paved to provide safe vehicular access, including vehicles towing stock trailers or other larger turning radius vehicles. This turnaround will be 80 feet in diameter and paved with approximately 2 to 3 inches of asphalt to provide a durable and lasting surface for the turning movements of vehicles. The turnaround will be striped and signed “No Parking”. Construction of the turnaround will result in new clearing of approximately 4,750 feet of vegetation and the placement of an estimated 5,100 square feet of asphalt pavement. The turnaround will be constructed using heavy equipment, will take an estimated 15 days to complete, and may occur concurrently with the removal of asphalt from the trail.

The trailhead parking area will be expanded to provide additional parking on the north side of the existing road for approximately 31 vehicles. This new parking area will be constructed using compacted gravel in place of the proposed asphalt paving in response to public concern and to minimize the impact of runoff from asphalt on water quality. New parking spaces will be approximately 12 feet wide and 24 feet long, and angled to maintain a road corridor that is 23 feet wide. Additional parking will be available on the existing gravel shoulder located on the south side of the road. This will provide up to 45 parking spaces. Surface drainage will continue to be sheet flow distributed across the south side of the roadway.

Expanding the parking lot on both the north and south side of the road, and increasing the vehicle turnaround area will require cutting approximately 2,400 cubic yards of soil from the northern slope of the existing road corridor. After construction the parking lot will contain approximately 28,300 square feet of compacted gravel surface. The edges of the parking lot will be designed to prevent encroachment of vehicle parking into the surrounding area. Construction of the parking area, not including the vehicle turnaround area, will result in new clearing of approximately 21,000 square feet of vegetation.

Construction of the expanded parking lot and vehicle turnaround will require the use of heavy equipment and approximately 40 full days of construction to complete. Trucks hauling excavated soil to a disposal area outside the park will use the Olympic Hot Springs Road and will pass adjacent to campgrounds and private residences immediately outside the park.

A designated pack stock staging area for loading and unloading stock will be established at the eastern end of the parking lot outside of the road corridor. A hitching post 20 feet in length will be placed adjacent to the loading area. This area will be striped and signed for stock loading and unloading only.

Additional animal-resistant trash receptacles and new recycling containers may be placed at the trailhead to accommodate increased visitor use. Additional restroom facilities may also be located at the trailhead if the existing toilet is found inadequate to meet visitor use and resource protection needs. The trailhead will be evaluated to determine if interpretive wayside exhibits would benefit visitor understanding of the Olympic Hot Springs/Boulder Creek area.

Boulder Creek Trail

Asphalt pavement will be removed from the Boulder Creek Trail. The trail will be rehabilitated and managed as a hiking and stock use trail. The trail tread will be either natural tread or gravel, typically managed on an annual basis. The trail corridor will be maintained to provide vegetation clearance to a width of 8 feet and vertical height of 10 feet. The trail will be approximately 24 inches to 30 inches wide. Areas outside of the trail width will be scarified using heavy equipment or hand tools to prepare the soil for revegetation and natural recovery. Best management practices will be implemented to minimize the potential for exotic plant species to be introduced or spread as a result of project activities.

Approximately 148,000 square feet of exposed asphalt will be cleared and excavated using heavy equipment. This will result in disturbance of up to 180,000 square feet of area on or surrounding the trail. The disturbed area also includes up to one foot along the outside edges of the asphalt and a limited amount of additional disturbance to route the trail outside of the established asphalt alignment to provide adequate drainage. Areas where soils have slid over the asphalt and where vegetation is established will remain in place to maintain the stability of uphill trail slopes.

Removal of asphalt on the trail will require the use of heavy equipment, such as tracked excavators, backhoes, wheeled loaders, dump trucks, and hand equipment for approximately 55 days. Asphalt will be pulled up and stacked in piles using the excavators. The asphalt will be loaded into dump trucks using the wheeled loaders. Where sensitive vegetation lines the edges of the trail, hand tools will be used to pull the remaining asphalt into the center of the trail where it would be loaded. The excavator and wheeled loader will be in continuous operation.

Asphalt located west of Crystal Creek, up to the campground parking lot, will be demolished and removed after September 15, or whenever heavy equipment may be delivered and operated without adversely affecting nesting marbled murrelets or northern spotted owls. This will require delivery of an excavator and small wheeled backhoe/front loader to the campground parking lot by helicopter. Material will be demolished, collected into sling loads, and removed by helicopter to Sweets Field where it will be loaded into dump trucks for removal from the park. This will require an estimated 30 helicopter trips, each 30 minutes in length. Alternately, if the material can be moved to the east end of Crystal Creek without the use of a helicopter, it will be transported by dump trucks down the trail and out of the park.

Temporary Large Vehicle Turnaround

Immediately east of Crystal Creek, a large slide area has covered the trail. In addition to clearing this slide from the trail to allow for removal of asphalt, additional material will be removed to allow for a vehicle turnaround for trucks hauling asphalt and soil out of the park. If necessary, this temporary turnaround will be maintained during construction using large native rocks or ecology blocks to prevent subsidence from the uphill slope. Construction of this turnaround will

result in disturbance of approximately 2,200 square feet of the slide slope, which is a previously disturbed area.

Boulder Creek Trail Culvert Removal and Grade Improvements

The existing culverts will be removed from the Boulder Creek trail. The culverts are between 3 feet and 8 feet deep and were placed to collect storm runoff from the road and hillside and divert it beyond the trail. Removal of the culverts will require the use of heavy equipment, such as tracked excavators, backhoes, wheeled loaders, dump trucks, and hand equipment for approximately six days. Culverts will be pulled up and stacked in piles using the excavators, then loaded into dump trucks for removal from the park. This work will not disturb any area outside of the trail corridor.

Following the removal of culverts, the trail grade will be improved using native soil to create a final grade matching the adjoining undisturbed trail. This work will be completed as part of the removal of asphalt along the trail. Re-establishment of the trail grade is necessary for the passage of equipment along the trail corridor. This work will require the use of a tracked excavator, backhoe, wheeled loader, dump trucks and compactor. Construction of water bars or other appropriate trail building techniques will be used to manage water flow across the trail.

Temporary Stream Crossings at Cougar and Hell Creeks

Temporary crossings will be placed over Cougar and Hell Creeks to allow the passage of trucks and equipment through the placement of equipment spanners. Spanners are self contained bridging structures designed for the passage of heavy equipment and trucks. The spanners used will be approximately 50 feet in length and 12 feet wide, constructed of a steel framework and deck. Spanners will be painted a neutral color and will have a wood deck placed over the steel surfacing.

The equipment spanners will be transported to Cougar and Hell Creeks by truck. It will take approximately 20 minutes to deliver the spanner to Cougar Creek and approximately 40 minutes to reach Hell Creek. They will be placed using tracked excavators, with installation taking an estimated thirty minutes for each temporary crossing. Once construction is complete, the spanner at Hell Creek will be removed to allow placement of a footlog.

Stream Crossings at Hell, Cougar, and Crystal Creeks

The partially collapsed wooden culvert at Hell Creek will be replaced with an approximately 40 foot long footlog for hikers and a ford for stock use along the existing trail alignment. The Hell Creek area will be surveyed to determine if a suitable fallen log is available nearby. If a suitable fallen log is not available, a fallen log will be located from another area of the park. If no suitable log is available in the park, a log may be purchased from outside the park. The log will be transported to the stream crossing site either by motorized transport up the trail or by helicopter if trail access is infeasible.

If a log is transported to Hell Creek via the trail, work will utilize a truck and a loader. A temporary stream crossing (12' spanner) will be placed across Cougar Creek to allow vehicles to drive up the trail. The work will last approximately 90 minutes. If transport over the trail is infeasible, the log will be flown to Hell Creek using a helicopter. The log will be staged at

Sweets Field (in the Elwha Valley) and transported using either a medium or heavy lift helicopter depending on the weight of the log. The duration of helicopter use needed to pick up the log, set it in place, and leave the area would be approximately 30 minutes. This work will occur when the noise impact from the helicopter will not result in an adverse effect to nesting marbled murrelets or northern spotted owls. If a heavy lift helicopter is used, this will require a flight after September 15.

A stock ford will be created by constructing a spur trail from the main hiking trail down to the ford. Any large rocks that may make the crossing unsafe for stock would be removed from the ford and placed nearby. The spanner bridge installed at Cougar Creek during construction will remain in place, with the 12 foot width reduced to 6 feet wide. A handrail will be installed on the bridge, and wood decking will be in place to support both pedestrian and stock use.

A bridge will be installed at Crystal Creek to accommodate both pedestrian and stock use. The bridge will be up to 150 feet long and up to 12 feet wide to provide stability for the longer structure, based on engineered design calculations. The bridge will provide approximately 40 feet of clearance from the bottom of the stream channel, and approximately 25 feet of clearance above the ordinary high water mark (OHW), and will be sized to account for snow loads. This will require the professional design and construction of a bridge off-site and transport by truck for staging prior to delivery. Little or no new disturbance will occur in previously undisturbed areas, as this work will take place within the existing trail corridor.

Reinforced concrete abutments for the bridge at Crystal Creek and spanner at Cougar Creek may be constructed during the course of asphalt removal along the trail. Abutments will contain approximately 5 cubic yards of concrete each at Cougar Creek and 10 cubic yards each at Crystal Creek. Abutments will be set according to design drawings of the bridge. Abutments approximately 8 feet by 4 feet by 4 feet deep (may change during design) will be on each end of the bridge at Cougar Creek. Abutments approximately 12 feet by 6 feet by 5 feet deep (may change during design) will be on each end of the bridge at Crystal Creek. Concrete for the uphill abutment at Crystal Creek will be flown by helicopter if another delivery method proves infeasible. Concrete for downhill abutment will be delivered over the trail.

Transport of the bridges will be either by road transport or by helicopter if road transport is infeasible. If helicopters are used they will be staged at Sweets Field and transported using a heavy lift helicopter. Each trip, from picking up the bridge to setting it in place on the prepared abutments will take approximately one hour. This work will be timed to occur outside of the nesting season for marbled murrelets and northern spotted owls to avoid adverse effects due to the noise of the helicopter.

The trail grade will generally match the proposed elevation of the bridges at Cougar and Crystal Creeks, requiring only minimal grading to match the trail grade to the bridge elevations. At Crystal Creek the rock face adjoining the trail abutment will require excavation to accommodate the placement of the abutment. This will require a tracked excavator with a rock hammer and removal of approximately 10 cubic yards of rock from the rock face on the eastern side of the trail.

Crystal Creek Culvert Removal

Within Crystal Creek, a failed 60 inch diameter culvert that is partially buried in the stream channel will be excavated and removed. This will require the use of cutoff saws, cables, winches and tracked equipment staged on the trail above the culvert. The culvert will be chopped into pieces and removed from the park by transport down the trail. The concrete headwall located in the stream channel will also be removed. Removal of the culvert and headwall will allow for the natural movement of water within the channel and of slope material, both of which are now blocked by the culvert. This work will be concurrent with asphalt removal while temporary crossings are in place over Cougar and Hell Creeks to allow the movement of equipment along the trail.

Abandoned Trash Dump Site

The access route to an abandoned trash dump east of Crystal Creek will be blocked with large boulders or other natural materials where it intersects with the Boulder Creek Trail. This work will be done concurrently with asphalt removal from the trail using hand tools and a small excavator to loosen the soil and prepare it for rehabilitation. Treatment to restore the route will include placement of downed logs or rocks and planting of small to medium-sized native plants and trees. This placement of materials is expected to result in disturbance of approximately 60 square feet to match the placed material to the adjoining vegetation line.

The excavator and hand equipment will be driven to the site from the trailhead. This will require temporary vehicle crossings be placed over both Cougar and Hell Creeks. Treatment of the actual dump site will be determined after the site is evaluated by the National Park Service in accordance with federal law and policy. This includes assessment of the site to determine if any contaminants are present that would require treatment. If removal of materials from the site is necessary, the area will be evaluated to determine if any historic materials requiring special treatment are present. If necessary, appropriate mitigation measures will be taken to address any adverse effects to historic properties.

Boulder Creek Campground

Culverts located in the campground will be removed. These culverts are between 3 to 15 feet deep and were placed to create a more level trail surface throughout the campground. After culverts are removed, any fill material present will be removed and graded to restore natural topography and drainage patterns in the area. A trail will be delineated through the former campground parking lot toward the hot springs trail and the existing pit toilet. Equipment will be used to recontour the compacted soil of the parking lot. Active site restoration will include soil scarification and revegetation.

Up to seven campsites will be delineated within the east (CCC) loop and up to four sites will be delineated within the mid-loop using downed logs and other natural materials. Campsites will be located in traditionally used areas where removal of mature vegetation will not be required. Up to three of the campsites will be designed to accommodate larger groups of seven to twelve people. The west loop of the campground will be closed to camping and restored to natural conditions. Extensive rehabilitation will occur in denuded areas outside of designated campsites and visitor use zones. Soil scarification, active revegetation and natural recovery will help restore previously disturbed areas to natural conditions.

New infrastructure to support stock use will include the replacement of a hitching rail for day use in the area of the former campground parking lot or near the bridge to the Olympic Hot Springs area. One campsite for stock users will be developed in the former campground parking lot apart from the newly delineated trail. In addition to campsite delineation consistent with the backpacker camping areas, this will require placement of a high line system for overnight use by campers traveling with pack stock. The area outside the campsite will be revegetated in a manner consistent with the rest of the Boulder Creek campground site restoration as described below.

Concrete foundations from two former restrooms will also be removed and the area restored to natural grade. If located, concrete septic tanks will also be removed. Removal of the culverts and foundations as described above will result in disturbance of approximately 2,000 square feet. Helicopter transport will be used to deliver and remove a small excavator with a front blade and tractor for the excavation and removal of culverts and foundations from the site. It is anticipated that this will require approximately two trips to deliver equipment, and eight trips to remove equipment, culverts, and restroom foundations from the campground. This work will be done in a manner that avoids adverse effects to northern spotted owls and marbled murrelets due to construction and noise impacts, and will be coincident with delivery of equipment for removal of asphalt from the trail on the west side of Crystal Creek. The equipment will be driven to the east side of Crystal Creek and staged for helicopter lift to the campground parking lot. Each helicopter flight will be approximately 15 minutes long for delivery and removal of equipment and materials using a heavy lift helicopter.

Campfire Ban

Campfires and the collection of firewood will no longer be allowed at the Boulder Creek campground. Existing campfire rings will be broken down, and the rocks scattered to discourage this use.

Campground Revegetation and Maintenance

Campsites will be clearly delineated. Trails from the campground to the former parking lot, hot springs, and Appleton Pass Trail will remain in their current locations. The road extending between the former parking lot and campground will be converted to a trail by narrowing any remaining wide sections. Areas outside of the trail will be scarified, delineated with the placement of downed logs or boulders, and actively planted to enhance natural recovery. Downed logs will be obtained from the surrounding area, if available. If downed logs are obtained from outside the immediate area they may be brought to the site using a helicopter for transport. If helicopter support is necessary it will occur outside of the early breeding season for northern spotted owls and marbled murrelets to avoid adverse effects associated with elevated noise level from helicopter use.

Maintenance of the campground will continue to include seasonal clearing of downed trees, cleaning and resupply of the toilets and removal of garbage on an as-needed basis, generally once a week during the high visitor use season. Relocating and excavating the pit for the pit toilets will be completed as required, generally every seven years, using hand tools. The type of toilet may be modified to allow for improved maintenance. The campground will continue to be patrolled by rangers.

Active revegetation of denuded areas within the campground will occur outside of delineated campsites and visitor use areas. Initial preparation of the ground for revegetation efforts will be completed using wheeled tractors with discs and tilling attachments. Work will also be done using hand tools. Any work performed with heavy equipment will be staged to coincide with asphalt removal on the trail and potential helicopter flight times. The excavator and hand equipment will be driven to the east side of Crystal Creek and staged for a helicopter lift to the campground parking lot. The helicopter flight will be approximately 15 minutes each for delivery and removal of the equipment using a heavy lift helicopter. Additional restoration and revegetation work will continue to occur in the project area in a manner consistent with the park’s wilderness restoration program.

Any downed logs used for trail or campsite delineation from outside of the immediate project area will be staged at either Sweets Field or another appropriate helicopter-accessible site. The helicopter flight will be approximately 30 minutes each for delivery using a heavy lift helicopter. The number of trips will be established based on the weight of the logs and the number needed for trail and campsite delineation. Flights will be limited to after September 15.

Future Wilderness Designation

The Washington Park Wilderness Act (1988) designated the Boulder Creek Campground as potential wilderness. The Boulder Creek Trail (former road) is currently outside the potential wilderness designation area, but will become suitable for wilderness designation after the road is removed. The Boulder Creek Campground and Trail will both be considered for designation as wilderness, within the National Wilderness Preservation System upon the successful removal of abandoned infrastructure and restoration of natural conditions within previously disturbed areas.

Mitigation Measures to Avoid or Reduce Impacts to Natural and Cultural Resources

The National Park Service has identified mitigation measures that will be implemented as part of the selected action to avoid or minimize adverse effects to natural and cultural resources and visitor experience. These measures have been updated based on consultation with the US Fish and Wildlife Service and public comments. These mitigation measures are binding and will be integrated into any contracts or work plans associated with the implementation of this project.

Resource Area	Mitigation
General Considerations	<p>Before the beginning of construction, construction limits would be surveyed and staked and may be marked with construction fencing, tape, flagging, snow fencing, or some similar material, as necessary. The construction limits identify and limit the area of construction activity. The contractor is responsible for ensuring that all work stays inside the construction limits. All protection measures would be clearly stated in the construction specifications and workers would be instructed to avoid conducting activities beyond the construction zone.</p> <p>Area staff would be notified when the project start date is known.</p> <p>Best management practices for drainage and sediment control would be implemented to prevent or reduce nonpoint pollution and minimize soil loss and sedimentation in drainage areas.</p>

	<p>Construction vehicle engines would not be allowed to idle for extended periods of time.</p> <p>All construction debris, including visible asphalt and metal culvert pieces, would be hauled from the Park to an appropriate disposal location. All tools, equipment, surplus materials, and rubbish would be removed from the project site upon project completion.</p>
Vegetation	<p>A revegetation plan would be developed to restore disturbed areas along the trail, former campground parking lot, and campground that include planting of native flora.</p> <p>Native species would be used in all revegetation.</p> <p>To maximize vegetation restoration efforts, the following measures would be implemented:</p> <ul style="list-style-type: none"> • Salvage topsoil and incidental native vegetation (as feasible) from construction areas for reuse during restoration. • Monitor revegetation success and exotic plants for up to 3 years following construction, implementing remedial and control measures as needed. <p>Temporary barriers would be provided to protect existing trees, plants, and root zones, Trees or other plants would not be removed, injured, or destroyed without prior approval from the park botanist.</p> <p>In effort to avoid introduction of non-native / noxious plant species, no imported hay/straw bales would be used during revegetation. On a case-by case basis, the following materials may be used for erosion control: pole peelings, wood straw, or other certified weed-free mulch products preapproved by Olympic National Park's chief botanist.</p> <p>Pressure wash hauling vehicles before entering the park for the first time; subsequent entries will not require pressure washing unless the vehicle shows signs of mud, plant material, or other substances that could harbor seeds or other parts of exotic plants.</p> <p>Ensure that tools and clothing are free of seeds or other parts of exotic plants before being used at the construction site.</p> <p>Cover all haul trucks bringing fill materials from outside the Park to prevent seed transport. (This may or may not be necessary depending on the timing of construction.)</p> <p>All fill, rock, and additional topsoil would be obtained from the project area, if possible. If not possible or if weeds are known to exist in the project area, then weed-free fill, rock, or additional topsoil would be obtained from sources outside the park. NPS personnel would certify that the source is weed-free. Areas which are disturbed by project activities will be revegetated using site-adapted native seed and/or plants, or sterile exotic plants</p>

<p>Water Quality and Soils</p>	<p>Use best management erosion-control practices for drainage and sediment control to prevent or reduce nonpoint source pollution and minimize soil loss and sedimentation in drainage areas. These practices may include but are not limited to, silt fencing, filter fabric, temporary sediment ponds, check dams of pea gravel-filled burlap bags or other material, and/or immediate mulching of exposed areas to minimize sedimentation and turbidity impacts as a result of construction activities. Silt fencing fabric would be inspected daily during project work and weekly after project completion, until removed. Accumulated sediments would be removed when the fabric is estimated to be approximately 75% full. Silt removal would be accomplished in such a way as to avoid introduction into any flowing water bodies.</p> <p>If weather conditions during project operations generate and transport sediment to the stream channels, operations would cease until weather conditions improve. The operation of ground-disturbing equipment during large precipitation events would increase the production of sediment that may be transported to flowing waters. This measure is designed to reduce the production of fine and coarse sediments, which may affect spawning gravels, substrate embeddedness, pool frequency/quality and the development of large pools if they reach the stream channel.</p> <p>In areas where drainages may cross multiple segments of the same trail, a drainage system will be established which supports the natural drainage pattern and the efficient removal of flowing water from the trail alignment.</p> <p>Stream banks would be properly sloped to an angle of stability (natural repose) when removing culverts. This measure can reduce sediment production from bank erosion, undercutting, and slumping as the stream channel reestablishes following culvert removal.</p> <p>A storm water site plan (SWSP) would be developed and approved by the park prior to commencing any near-water activities.</p> <p>Regular site inspections would be conducted to ensure that erosion-control measures are properly installed and functioning effectively.</p> <p>Prior to starting work each day, all machinery would be inspected for leaks (e.g., fuel, oil, and hydraulic fluid) and all necessary repairs would be made before the commencement of work. This measure is designed to avoid/minimize the introduction of chemical contaminants associated with machinery used in project implementation.</p> <p>Delineate wetlands and apply protection measures during projects. Perform project activities in a cautious manner to prevent damage caused by equipment, erosion, siltation, etc.</p> <p>Any machinery maintenance involving potential contaminants (e.g., fuel, oil and hydraulic fluid) would occur outside the riparian area, defined as the entire channel migration zone or a distance greater than 150 feet from the stream edge. This measure is designed to avoid/minimize the introduction of chemical contaminants associated with machinery used in project implementation.</p> <p>Hazardous spill clean-up materials would be on-site at all times. This measure is designed to avoid/minimize the introduction of chemical contaminants associated with</p>
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	<p>machinery used in project implementation. Chemicals may have a toxic effect on aquatic organisms, including salmonids.</p>
<p>Special Status Species</p>	<p>Since the project must be conducted during the breeding season for spotted owls and murrelets, it shall occur as late in the breeding season as possible. Operating between August 6 and February 28 is preferable, to minimize disturbance effects to spotted owls and murrelets.</p> <p>Work activities from April 1 to September 15 that produce noise above ambient levels and are adjacent to murrelet suitable habitat shall be conducted between two hours after sunrise and two hours before sunset.</p> <p>No large diameter trees (greater than 21 inches dbh) that contain suitable nesting structure (e.g., large limbs, natural nest platforms, broken tops or cavities) for northern spotted owls or murrelets will be cut.</p> <p>To avoid adverse impacts to breeding murrelets and spotted owls, any noise-producing construction activities above 92 decibels and adjacent to murrelet or spotted owl suitable habitat will not occur until after August 5 and before March 1. This will ensure that heavy equipment operation will occur outside of the prime breeding season, yet provide a window for construction to be completed before winter weather.</p> <p>The Park will maintain strict garbage control to prevent scavengers (e.g. corvids), which are predators on murrelet nests, from being attracted to the project area. No food scraps will be discarded or fed to wildlife.</p>
<p>Visitor Experience and Recreational Resources</p>	<p>Visitors would be informed in advance of construction activities.</p> <p>The trail would be closed to all visitors during construction activities. If a visitor inadvertently comes upon construction, they would be escorted through the construction zone and/or routed away from construction activities.</p> <p>The Wilderness Information Center would be notified when the project start date is known so that they may inform wilderness users.</p> <p>The ONP Public Information Officer would be provided with the project schedule (as soon as it is known) and periodic update of project work to inform visitors of project status and access.</p>
<p>Cultural Resources</p>	<p>Should any archeological resources be uncovered during construction, work would be halted in the area and the park archeologist, Office of Archeology and Historic Preservation (OAHP), and appropriate Native American Tribes would be contacted for further consultation.</p> <p>Park cultural resources staff would be available during construction to advise or take appropriate actions should any archeological resources be uncovered during</p>

	<p>construction. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed.</p> <p>The NPS would ensure that all contacts and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging archeological sites or historic properties. Contractors and subcontractors also would be instructed on procedures to follow in case previously unknown archeological resources are uncovered during construction.</p> <p>Equipment and material staging area would avoid known archeological resources.</p>
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Alternatives Considered in the Environmental Assessment

The December 18, 2009 EA describes four alternatives.

Alternative 1- the no action alternative, describes current management of the Boulder Creek trailhead, trail, and campground. Under the no action alternative the National Park Service would not implement the actions identified for the Boulder Creek trail and campground in the 2008 General Management Plan (GMP). Only routine maintenance of existing structures would occur. No new infrastructure would be built. The no action alternative provides a baseline against which other alternatives may be compared.

Under Alternative 2 – Minimum Visitor Services Infrastructure, Extensive Restoration, the National Park Service would implement the actions identified for the Boulder Creek trail and campground in the 2008 GMP so as to create and maintain the minimum amount of infrastructure necessary to achieve project objectives.

Under Alternative 3 – Provide Moderate Visitor Services, Active Revegetation, the National Park Service would implement the actions identified for the Boulder Creek trail and campground in the 2008 GMP by taking actions necessary to achieve project objectives as identified in Alternative 2, while providing limited additional visitor services.

Under Alternative 4 – Provide Enhanced Visitor Services, Active Revegetation (Management Preferred), the National Park Service would implement actions identified for the Boulder Creek trail and campground in the 2008 GMP by taking actions necessary to achieve project objectives while providing additional visitor services. This alternative was modified as previously described for the selected action.

Environmentally Preferred Alternative

The environmentally preferred alternative is the action that best promotes the environmental policies outlined in the National Environmental Policy Act (NEPA). These policies include fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations; assuring for all generations safe, healthful, productive, and esthetically and

culturally pleasing surroundings; attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences; preserving important historic, cultural and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice; achieving a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources (NEPA, section 101).

Although all action alternatives meet the criteria listed above to varying degrees, it was determined in the EA that Alternative 4 is the environmentally preferred alternative. This alternative provides safe access to pedestrians and stock users during the longest period of time with the least amount of impact to natural and cultural resources during construction and through ongoing maintenance. Each of the action alternatives results in the removal of asphalt from the trail, restoration of natural drainage patterns in the campground, and active revegetation outside of designated visitor use areas. Alternative 4 reduces the number of campsites from current levels, but provides adequate facilities to support both backpackers and people camping with pack stock. This determination was upheld during an interdisciplinary workshop that found Alternative 4 was superior to the other alternatives in terms of providing for visitor safety, sustainability, natural and cultural resource protection, and visitor experience.

Public Involvement

Olympic National Park conducted public scoping for the Boulder Creek trail and campground rehabilitation project from February 5, 2009 to March 9, 2009. Project information was posted on the park website and on the NPS Planning, Environment and Public Comment (PEPC) website. A news release and letter soliciting public comments and describing the proposed action was sent to approximately 150 individuals, interest groups, government agencies, and area tribes on the park's mailing list.

An article providing project information and requesting public input was published in the February 8, 2009 Peninsula Daily News, National Parks Traveler website on February 6, 2009, and in the Tacoma News Tribune on February 12, 2009. A news announcement was aired on the local radio station, KNOP, on February 6, 2009. Respondents had the opportunity to provide written comments, fax comments, or input comments into the NPS compliance web system (PEPC). Eight individuals and three different organizations responded. Overall comments were supportive of the project. One respondent did not agree with the project. Respondents provided comments and useful information regarding how the project work should be conducted while protecting park resources. All comments were considered in the development of the environmental assessment.

The park distributed a press release announcing the availability of the Boulder Creek Trail and Campground Rehabilitation EA for public review and comment on Thursday, December 17 to a mailing list that includes over 15 local and regional newspapers, seven radio stations and all Seattle TV stations, as well as numerous interest groups and private individuals. The news

release was also posted on the park website, with links to the full environmental assessment. Additionally, over 120 groups, individuals and libraries on the EA mailing list received either a copy of the EA or notification explaining how to access the document on-line. A radio notification was made on local talk radio station KONP AM 1450 on December 18, 2009. An article was published in the Sequim Gazette on December 23, 2009. An article was published in the Tacoma News Tribune on December 24, 2009. On December 25, 2009 an article was printed in The Olympian newspaper. An article was published in the Peninsula Daily News on December 27, 2009 that stated in error that the park's preferred alternative was to build the trail to a width of 24 to 30 feet in width instead of the proposed 24 to 30 inches. A correction was printed on December 31, 2009 but some comments received were based on this incorrect information.

The park received comments from 73 organizations and individuals. Substantive comments are those that question, with reasonable basis, the accuracy of information in the EA or the adequacy of the environmental analysis. Substantive comments may also present reasonable alternatives other than those presented in the EA, or may cause changes or revisions in the proposal. Comments in favor of or against the proposed action or alternatives are not considered substantive and are not responded to below. Changes made to the management preferred alternative are described as part of the selected action.

The park also received comments that were addressed in the EA, or that suggested additional actions or modifications that were considered, but not adopted by the National Park Service, as discussed below.

One person requested that the public comment period for the EA be extended due to inadequate notification by the park to local and regional media. The National Park Service did not extend the comment period because extensive efforts were made to inform the media and interested public, and numerous organizations and individuals responded within the established comment period.

Several comments requested that the park consider providing for overnight use at the Boulder Creek trailhead parking area, or at least consider installing a high line system for overnight stock use in this area. After considering this request, the park found that the proposal is outside of the scope of the current trail and campground rehabilitation project. Space is a limiting factor at the trailhead, and the park has not yet studied whether the addition of overnight use would provide the desired visitor experience at this location. Addition of overnight use in the limited space available may increase congestion and result in visitor use conflicts. Development of overnight use at the trailhead may be considered in the future as a separate project.

A few comments suggested that the park consider developing alternative public transportation to the trailhead rather than expand and improve on the current parking lot. Although the 2008 General Management Plan (GMP) for Olympic National Park identifies sustainable access through mass transit as a goal, it identified that this would be pursued at Hurricane Ridge, the Hoh Rainforest, Sol Duc, and Kalaloch. Although the Elwha area was not identified in the GMP, the park would consider this as a future action after higher priority public transit areas have been addressed.

The park received a couple of comments from individuals who suggested that the park should have considered an alternative that only addressed the stream crossings, either through placement of footlogs or bridges, and not the other actions proposed in the EA. Such an alternative would not meet the objectives identified for the Elwha Area in the GMP and would not address the project purpose and need, and as such has been considered and dismissed.

A few organizations suggested that the park should establish overnight use limits to protect the proposed revegetation effort, to enhance visitor experience and to protect the campgrounds wilderness character. The park intends to address visitor use limits as part of the upcoming Wilderness Management Plan development. This plan will look at wilderness use across the park and establish management direction related to visitor use, including the establishment of visitor use levels that will protect wilderness character.

The park also received a comment suggesting that the project should have included the Olympic Hot Springs area. Restoration of the springs was established as a goal in the 2008 GMP. A separate plan to develop restoration methods will be prepared as a separate project in the future.

The park received comments requesting that the size of the trailhead parking lot be either increased or decreased. Based on visitor use patterns, topographic constraints, and visitor experience and resource management goals, the park will expand the parking lot to the size and capacity described in the preferred alternative in the EA.

One person suggested that expanded parking should not be built on the north side of the trail because slumping from the hillside above could bury cars in the event of a bank failure, perhaps during an earthquake. The conceptual design for the expanded parking lot was developed by a civil engineer to provide for safe visitor use. The extent of the slope will not be at a steep grade. Final construction plans will be developed to ensure that the resulting slope of the uphill side of the expanded parking lot will not pose a safety hazard to people or vehicles parked in this area.

A comment was also received suggesting that the park consider building the proposed bridges to a shorter length. The length of the proposed bridges was determined by a civil engineer in consideration of providing adequate clearance above ordinary high water levels and minimizing the amount of blasting, excavation, and ground disturbance that would be needed to match the bridges to the trail grade. The length of the bridges is intended to minimize the extent of disturbance to natural resources and avoid impacts to the stream channels from construction.

The park was also asked to consider building the proposed bridges from native materials. Final design of the bridges must take into account many factors, including visitor safety, operational efficiency (the ability of the park to build and maintain the bridge to provide continued access), sustainability, visual appeal (which varies by individual), and cost limitations. After considering these factors the park determined that steel bridges were most effective.

Wilderness Act

The Boulder Creek campground is designated as potential wilderness. Designated wilderness is located 25 feet from the centerline of the Boulder Creek Trail, although the trail itself is not currently in wilderness. The park conducted a minimum requirements/minimum tool assessment and included a draft of the Minimum Requirements Worksheet (MRW) as an appendix to the EA. This MRW supports the selection of Alternative 4 described in the EA and is consistent with the selected action as described in this FONSI. The MRW was signed by the Superintendent of Olympic National Park on January 13, 2010 and is included in the Boulder Creek administrative record.

Clean Water Act and Endangered Species Act Consultation

The National Park Service contacted the Army Corps of Engineers (ACOE) on October 5, 2009 to discuss if permits would be required pursuant to the Clean Water Act. At that time a preferred alternative had not been selected, but a range of alternatives had been developed. ACOE stated that it was unlikely a permit would be required, but that the park should contact ACOE once an action is selected. NPS contacted ACOE on January 12, 2010 to discuss whether a permit is needed for the selected action. ACOE regulatory specialist stated that since the project does not occur in navigable waters, and no fill is proposed for placement as part of project activities, that no permit is required.

Three federally listed species occur in the Boulder Creek project area – the marbled murrelet, northern spotted owl, and bull trout. The selected action was developed with the clear intent of avoiding or minimizing adverse effects to listed species. This includes implementation of mandatory mitigation measures and best management practices developed in consultation with the U.S. Fish and Wildlife Service (FWS) as described in the project mitigation table.

Based on the information provided in the December 18, 2009 Boulder Creek EA and mitigation measures which are integral parts of the selected action, the FWS concluded that effects to the federally listed marbled murrelet, northern spotted owl, and bull trout will be insignificant or discountable. The FWS concurred with the National Park Service “may affect, not likely to adversely affect” determination for the proposed action in accordance with the Endangered Species Act. This conclusion is documented in a memorandum from the Washington Fish and Wildlife Office in Lacey, Washington on January 7, 2010.

Cultural Resource and Tribal Consultations

The National Park Service notified the Washington State Historic Preservation Officer (SHPO) of the proposed project on January 12, 2010. Based on the selected action, the National Park Service requested concurrence with a finding of No Effect on Historic Properties in accordance with the National Historic Preservation Act. If new information becomes available that would change this effect determination, the park will consult with the affected Tribes to develop a

MOA to develop an appropriate mitigation plan. The SHPO responded with a letter of concurrence on January 13, 2010.

The Lower Elwha Klallam Tribe, Port Gamble S'Klallam Tribe, and Jamestown S'Klallam Tribe were provided with an administrative review draft of the Boulder Creek EA in November, 2009 and a copy of the public review draft in December, 2009 with an invitation to consult with the National Park Service on the development of this project. No concerns were raised by the Tribes related to this project.

Why This Project Will Not Have a Significant Effect on the Environment

As defined by 40 CFR 1508.27, significance is determined by examining the following criteria: *impacts that may be both beneficial and adverse and which on balance may be beneficial, but that may still have significant adverse impacts that require analysis in an environmental impact statement.* No potentially significant adverse or beneficial impacts were identified that will require analysis in an environmental impact statement

This section summarizes effects on resources in the context of the project area and the park as a whole, and documents that none of these effects is significant, highly controversial, or uncertain, nor will the selected action adversely affect public health and safety. The proposed actions will improve public safety by providing improved stream crossings. A summary of cumulative impacts are discussed below under each impact topic; these summarize that the selected action is not related to other actions with individually insignificant, but cumulatively significant, impacts. Further, the selected action violates no federal, state, or local environmental protection laws, it is not part of a larger action and will not establish a precedent for future actions.

The selected action will result in both beneficial and adverse impacts. Most adverse impacts are short-term in duration, and primarily site-specific in nature. Most beneficial impacts are long-term in nature and are expected to occur throughout the project area. As described below, the effects of the selected action have been considered under the criteria for significance listed in the Council on Environmental Quality regulations (40 CFR 1508.27) and found to be less than significant.

Geologic Features and Soils

Adverse, site-specific, long-term to permanent minor adverse impacts will occur due to construction of an 80' diameter vehicle turnaround area at the Boulder Creek Trailhead due to clearing, compaction, and paving with asphalt. This will result in approximately 4,750 square feet of newly disturbed area, and paving of approximately 5,100 square feet with asphalt.

Removal of asphalt and culverts from the trail corridor will result in site-specific, short-term negligible to minor adverse impacts during construction due to excavation using heavy equipment, and the associated ground disturbance covering approximately 180,000 square feet (including the 148,000 square feet of asphalt to be removed).

Construction of a temporary large vehicle turnaround area near Crystal Creek will result in adverse, site-specific, short-term minor to moderate impacts due to the excavation of unstable soils that may result in increased erosion and instability until construction is complete and the area is allowed to reach a new state of stability, or angle of repose. Construction of the temporary large vehicle turnaround will affect an area of approximately 2,200 square feet.

Removal of culverts, concrete restroom foundations, and recontouring of compacted soils within the former campground parking lot will result in short-term negligible to minor adverse impacts due to ground disturbance during project implementation. This work will affect an area of approximately 2,000 square feet.

Beneficial, site-specific and local, long-term to permanent minor to moderate impacts will result from the removal of approximately 148,000 square feet of asphalt from the trail and the decompaction of soils along the rehabilitated trail length, and also in the decompacted areas within the campground and former campground parking lot.

Adverse, site-specific, long-term to permanent minor to moderate adverse impacts will occur due to the expansion of parking on the north side of the existing lot to create a compacted gravel parking surface covering approximately 28,300 square feet. This will require clearing and disturbance of approximately 21,000 square feet. Additional soil compaction will occur within the 24-30 inch tread width of the new trail.

The selected action will also result in adverse, site-specific, short-term negligible to minor impacts to soils during construction of the new trail and grading of the trail to match the footlog and bridges placed at three stream crossings. This will include removal of approximately 20 cubic yards of rock at the Crystal Creek stream crossing and cut and removal of approximately 20 cubic yards of trail embankment to bring the trail grade to the proposed location of the new 150 foot long steel bridge at this site.

Best management practices will be implemented to prevent material from entering the stream channel. Soil compaction will continue to occur in the eleven campsites that will be retained at the Boulder Creek Campground, and along the length of the trail segments retained in this area. This will result in adverse, site-specific, long-term to permanent minor impacts.

Installation of a day-use stock hitching rail near the Boulder Creek campground near the former parking lot, and a campsite with a high line system for overnight use for the associated campsite may result in adverse, site-specific, short to long-term minor to moderate impacts due to the concentrated use in this area for pack stock, and the associated soil compaction that will occur.

Cumulative Impacts. The original construction of the Boulder Creek Road resulted in minor to moderate adverse impacts to geologic resources from earthwork, excavation, and asphalt paving. Ongoing regular maintenance and repairs to the trail (former road) will have minor adverse effects to the Boulder Creek watershed, negligible adverse effects to the Elwha River, and minor adverse effects to geologic resources because surface disturbances occur primarily within existing areas of disturbance. The NPS plan to restore the Elwha River may benefit stream geomorphology of Boulder Creek by restoring natural fluvial processes at the mouth of the

creek. After the restoration of the Elwha River, sediment and debris from the eroding slopes in the Boulder Creek drainage will flow directly into the Elwha River. Sediment will create an alluvial fan, altering the delta where the creek and the current reservoir meet. Cumulative impacts on geologic resources will remain minor to moderate from past and current activities in the basin even with the slight beneficial effects of the proposed dam removals, which will restore the natural geomorphologic processes of both the Elwha River and Boulder Creek watershed.

Hydrologic Processes and Water Quality

Adverse, site-specific, long-term to permanent negligible to minor adverse impacts will occur due to construction of an 80 foot diameter vehicle turnaround area at the Boulder Creek Trailhead. Clearing, compaction, and paving with asphalt, which is not permeable, will alter surface water flow in an area approximately 5,100 square feet. Removal of asphalt and culverts from the trail corridor, and the construction of a temporary large-vehicle turnaround area will result in local, short-term, negligible to minor adverse impacts during construction due to excavation using heavy equipment, and the associated ground disturbance and potential for erosion in the event that a heavy rainfall event occurs that transports construction-generated sediments.

Removal of culverts, concrete restroom foundations, and recontouring of compacted soils within the former campground parking lot will result in short-term negligible to minor adverse impacts due to ground disturbance during project implementation and the associated erosion that may occur if a heavy rainfall event occurs during project implementation. Beneficial, site-specific and local, long-term to permanent minor to moderate impacts will result from improvement of surface water flow along the improved Boulder Creek Trail, and within the recontoured and revegetated areas in the Boulder Creek campground and former campground parking lot.

The selected action will result in adverse, site-specific, long-term to permanent minor to moderate adverse impacts due to the expansion of parking on the north side of the existing lot to create a compacted gravel parking surface in an area covering approximately 28,300 square feet.

The selected action will also result in adverse, site-specific, short-term negligible impacts to water quality during construction of the new trail and grading of the trail to match the footlog and bridges placed at three stream crossings. This will include removal of approximately 20 cubic yards of rock at the Crystal Creek stream crossing and cut and removal of approximately 20 cubic yards of trail embankment to bring the trail grade to the proposed location of the new 150 foot long steel bridge at this site. Best management practices will be implemented to prevent material from entering the stream channel.

Installation of a day-use stock hitching rail near the Boulder Creek campground near the former parking lot, and a campsite with a hitching rail or high line system for overnight use for the associated campsite may result in adverse, site-specific, short-term negligible to minor impacts to water quality due to the concentrated use for pack stock, and the associated potential for soil erosion, and runoff from manure that may occur in the immediate area.

Cumulative Impacts. The original construction of the Boulder Creek Road resulted in minor to moderate adverse impacts to hydrologic processes and water quality from earthwork, excavation, and asphalt paving. Ongoing regular maintenance and repairs to the trail (former road) would have minor adverse effects to the Boulder Creek watershed, negligible adverse effects to the Elwha River, and minor adverse effects to hydrologic resources because surface disturbances and erosion occur primarily within existing areas of disturbance. The NPS plan to restore the Elwha River may benefit stream geomorphology of Boulder Creek by restoring natural fluvial processes. After the restoration of the Elwha River, the sediment and debris from the eroding slopes in the Boulder Creek drainage would flow directly into the Elwha River. Sediment would create an alluvial fan, altering the delta where the creek and lake meet.

Air Quality

The selected action will result in adverse, local, short-term minor impacts to air quality from vehicle and heavy equipment used to implement this alternative. It is anticipated this work will occur over a period of approximately nine weeks.

Cumulative Impacts. The ongoing use of the area will result in adverse, local, short-term to long-term, negligible to minor impacts from vehicular access to the trailhead by visitors and park staff accessing the project area in motorized vehicles. Implementation of this project concurrent with the removal of the Elwha and Glines Canyon dams will likely result in cumulative, adverse, short-term, negligible to minor impacts to air quality during construction due to the use of blasting, vehicles, and heavy equipment.

Vegetation

Adverse, site-specific, long-term to permanent impacts will occur due to the removal of vegetation in the trailhead parking lot area due to the expansion of the vehicle turnaround area and additional vegetation clearance to expand parking on the north side of the road.

Approximately 4,750 square feet of vegetation will be removed due to the expansion of the vehicle turnaround area at the trailhead parking lot. This is not an area with old-growth characteristics, and it appears that the area has been previously cleared in decades past.

Approximately 85% of conifers are between 6" – 16" in diameter, with very few trees 21" in diameter or greater.

Additional adverse, site-specific and local, short-term negligible to minor impacts will also occur during asphalt removal, but no old-growth or rare species will be affected. Beneficial, site-specific and local, long-term, minor to moderate impacts due to the rehabilitation of the trail corridor, campground, and former campground parking lot will occur due to the ban on campfires and wood collection and active revegetation throughout the project area. This will include revegetation of the former road leading to an abandoned trash dump east of the campground near Crystal Creek. Best management practices, such as the mitigation measures identified in Appendix A of the EA will be implemented to avoid and minimize the potential for the introduction or spread on non-native plant species due to construction and rehabilitation efforts.

The selected action will result in adverse, site-specific, negligible to minor impacts due to concentrated stock use within the area immediately adjacent to the new stock campsite with

hitching rail or high line system, and the day-use hitching rail proposed near the former campground parking lot. Beneficial, site-specific and local, long-term, minor to moderate impacts will occur due to the rehabilitation of denuded areas associated with approximately 19 former campsites. Adverse, site-specific, long-term to permanent, minor to moderate impacts will occur due to the loss of vegetation covering approximately 21,000 square feet due to the expansion of the trailhead parking lot.

Cumulative Impacts. Non-native plants have been intentionally and accidentally introduced to the region, and the project area. Efforts to limit the spread of non-native plants are taking place both within and outside of the park. Active treatment to reduce the extent of non-native plants is occurring in the project area, the park, and outside park boundaries. However, it is likely that non-native plants will continue to be unintentionally spread both within and outside the park boundaries. Actions will continue to be taken to limit spread and reduce the extent of non-native plants in order to protect native plant communities and the functioning of the ecosystems of which they are a key component. Best management practices will be implemented to avoid the unintentional introduction or spread of non-native plant species as a result of project activities.

Wildlife

Adverse, site-specific, local, and regional impacts will occur due to the visual and noise-related disturbances from the use of helicopters, heavy equipment, and powered hand-tools during the expansion of the trailhead parking area, removal of asphalt and culverts from 2.2 miles of trail, and the removal of culverts and concrete foundations from the former campground restrooms. It is expected that these actions will alter use of the immediate and surrounding area by individual animals during the period of construction, resulting in animals using other similar habitat within the park until the project work is complete. No direct mortality is anticipated due to construction and rehabilitation activities, although the kinds and amounts of construction related activities may unintentionally harass native wildlife that are unaccustomed to the proposed actions.

Beneficial, site-specific and local, long-term minor to moderate impacts are anticipated due to the removal of asphalt and narrowing of the travel corridor. This will minimize the presence of this potential barrier to wildlife movement across the landscape. Additionally, the active revegetation of the trail corridor and areas in the Boulder Creek campground and former campground parking lot will provide increased habitat and improved habitat quality for wildlife when the project is complete.

Adverse, site-specific and local, short-term minor impacts will occur due to noise related to install a 50 foot long bridge at Cougar Creek and a 150 foot long bridge at Crystal Creek, and the number of vehicle trips required to remove approximately 20 cubic yards of rock and 20 cubic yards of soil and fill materials from the trail embankment at Crystal Creek. Beneficial, site-specific and local, long-term minor to moderate impacts will result from habitat expansion and improvement due to the revegetation of denuded areas associated with approximately 19 former campsites.

Cumulative Impacts. Human use and development both within and outside of the park has reduced the quantity and quality of wildlife habitat due to changes in species composition, habitat structure, and ecosystem function. Large protected areas like Olympic National Park also

provide extensive intact habitat that provide alternate feeding, sheltering, and breeding locations for many animals in the park and surrounding area when site specific impacts occur that change wildlife use patterns. Active restoration efforts for individual species of wildlife also occur, including the reintroduction of fisher within Olympic National Park. Efforts to restore and improve both terrestrial and aquatic habitat is also occurring both within and outside of park boundaries, including within the Boulder Creek project area.

Fish and Essential Fish Habitat

Removal of asphalt and failed culverts from 2.2 miles of trail has the potential to contribute sediment into Boulder Creek if a large rainfall event occurs during construction activities near tributary streams. It is anticipated that the implementation of best management practices will prevent adverse impacts, but the potential for adverse, short-term, regional, negligible impacts due to increased sediment exists. However, it is unlikely that the amount of sediment that might enter stream waters in the project area would be detectable above background water quality levels below the fish barrier cascade where increased sediment would otherwise have the potential to adversely impact resident fish.

The selected action will result in adverse, regional, short-term, negligible impacts to fish and fish habitat due to the potential introduction of sediment into Crystal Creek due to installation of the proposed 150 foot long bridge at this location. However, it is unlikely that the amount of sediment that might enter stream waters in the project area will be detectable above background water quality levels below the fish barrier cascade, located over five miles downstream from the Crystal Creek trail crossing, where increased sediment would otherwise have the potential to adversely impact resident fish.

Cumulative Impacts. Construction of the Elwha and Glines Canyon dams blocked passage to the upper Elwha watershed for resident and anadromous populations of fish. Changes in human use patterns, including consumption of fish and alteration of fish habitat has reduced the distribution and abundance of native fish species. Removal of the Elwha and Glines Canyon dams will have temporary adverse effects on fish and fish habitat, but will have significant long-term beneficial impacts on anadromous fish and river habitat. Removal of the Griff Creek barrier culvert will also extend suitable fish habitat on the Elwha watershed and will provide refuge for fish during the dam removal project. Due to the distance from fish habitat in the Elwha watershed, it is unlikely that the actions considered for this project would result in a detectable cumulative impact.

Threatened and Endangered Species

Expansion of the vehicle turnaround at the trailhead parking lot will result in adverse, site-specific, long-term, minor to moderate impacts due to the removal of coniferous forest vegetation from approximately 4,750 square feet of previously disturbed forest. Approximately 85% of trees are between 6" – 16" in diameter, with very few trees 21" in diameter or greater. No trees with structural components, such as large branches with suitable nesting platforms for marbled murrelets would be removed. The surrounding forest will remain intact and will continue to provide suitable nesting, roosting and dispersal habitat for northern spotted owls, although displacement due to the presence of barred owls will likely continue. Construction will

occur after the early breeding season to avoid and minimize noise-related impacts to marbled murrelets and northern spotted owls. No effects to bull trout are anticipated from expansion of the vehicle turnaround area.

Removal of asphalt from 2.2 miles of trail, removal of culverts from the trail and campground, and removal of abandoned infrastructure in the campground will not result in the loss of any mature trees. Disturbance will be limited to the removal of young plants that have become established immediately adjacent to the asphalt trail, or on top of fill material that has slumped onto the trail since the road was closed to automobile use in the early 1980s. Visual and noise-related disturbances from the use of helicopters, heavy equipment, and powered hand-tools during the expansion of the trailhead parking area, removal of asphalt and culverts from 2.2 miles of trail, and the removal of culverts and concrete foundations from the former campground restrooms will result in adverse, site-specific to regional, minor impacts. It is expected that these actions may alter use of the immediate and surrounding area by individual marbled murrelets or northern spotted owls during the period of construction, resulting in animals using other similar habitat within the park until the project work is complete. No direct mortality is anticipated due to construction and rehabilitation activities, although the kinds and amounts of construction related activities may unintentionally affect individual birds. All use of heavy equipment and helicopters will occur outside of the early breeding season for marbled murrelets and northern spotted owls. This is intended to avoid or minimize the potential to adversely affect these species.

Revegetation work will be done by hand, and is not anticipated to result in additional disturbance to marbled murrelets or northern spotted owls above existing levels due to visitor use in the project area. If materials for campsite delineation require helicopter transport of logs or other materials, this work will occur outside of the nesting period for northern spotted owls and marbled murrelets. Beneficial, site-specific, long-term minor impacts are expected due to the restoration of a native vegetation understory due to the planned restoration activities along the trail and in the campground and former campground parking lot.

Removal of asphalt and failed culverts from 2.2 miles of trail has the potential to contribute sediment into Boulder Creek if a large rainfall event occurs during construction activities near tributary streams. It is anticipated that the implementation of best management practices will prevent adverse impacts, but the potential for adverse, short-term, regional, negligible impacts due to increased sediment exists. However, it is unlikely that the amount of sediment that might enter stream waters in the project area will be detectable above background water quality levels below the fish barrier cascade where increased sediment would otherwise have the potential to adversely affect resident bull trout.

Expansion of the trailhead parking lot will result in adverse, site-specific, long-term, minor to moderate impacts due to the removal of coniferous forest vegetation from approximately 21,000 square feet of previously disturbed forest. Approximately 85% of trees are between 6" – 16" in diameter, with very few trees 21" in diameter or greater. No trees with structural components, such as large branches with suitable nesting platforms for marbled murrelets will be removed. The surrounding forest will remain intact and will continue to provide suitable nesting, roosting and dispersal habitat for northern spotted owls, although displacement due to the presence of barred owls will likely continue. Construction will occur after the early breeding season to avoid

and minimize noise-related impacts to marbled murrelets and northern spotted owls. No effects to bull trout are anticipated from expansion of the trailhead parking area.

Adverse, site-specific and local, short-term minor impacts will occur related to installation of a 50 foot long bridge at Cougar Creek and a 150 foot long bridge at Crystal Creek, and the number of vehicle trips required to remove approximately 20 cubic yards of rock and 20 cubic yards of soil and fill materials from the trail embankment at Crystal Creek. This work will occur after the early breeding season for northern spotted owls and marbled murrelets to minimize the potential for adverse effects. Beneficial, site-specific and local, long-term minor to moderate impacts will result from habitat expansion and improvement due to the revegetation of denuded areas associated with approximately 19 former campsites.

The selected action will result in adverse, regional, short-term, negligible impacts to bull trout and bull trout habitat due to the potential introduction of sediment into Crystal Creek due to installation of the proposed 150 foot long bridge at this location. However, it is unlikely that the amount of sediment that might enter stream waters in the project area will be detectable above background water quality levels below the fish barrier cascade, located over five miles downstream from the Crystal Creek trail crossing, where increased sediment would otherwise have the potential to adversely affect resident bull trout.

Cumulative Impacts. Development for human use both within and outside of the park has reduced the extent of suitable habitat for threatened and endangered species, such as the northern spotted owl, marbled murrelet, and bull trout. These changes have affected the composition, structure, and function of species populations and habitat. A programmatic biological opinion was prepared during the preparation of the Olympic National Park General Management Plan. All actions taken in the park must take into account the potential to adversely affect listed species or habitat. Many ongoing activities, including road and trail construction and maintenance have the potential to adversely affect listed species and habitat. Best management practices are implemented to avoid or minimize the potential for adverse impacts associated with park activities.

Removal of the Elwha and Glines Canyon dams has the potential to adversely affect listed species and habitat over the short term, but will significantly improve habitat for threatened and endangered fish species over the long term. Implementation of the fish-barrier culvert removal project on Griff Creek will also result in long-term beneficial effects to bull trout by extending suitable habitat and providing refuge during dam removal activities. Other actions taken both within and outside of the park have the potential to adversely affect, or improve the quality of suitable habitat for threatened and endangered species.

All alternatives considered in this plan were developed to avoid or minimize the potential for adverse effects to threatened and endangered species and habitat. Work with the potential to cause noise related impacts would occur outside of the early nesting season to reduce the potential for adverse effects to nesting marbled murrelets and spotted owls. No actions are likely to harm individual animals or result in mortality. Distance from project activities with the potential to affect aquatic habitat for bull trout make adverse impacts to this species unlikely due

to the presence of a fish barrier cascade over two miles downstream from the nearest project activity.

Wetlands

Removal of culverts and fill materials in the Boulder Creek Campground is intended to restore natural topography and associated hydrologic conditions within the project area. If the wetland present in the campground is partially dependent of the presence of fill material and failed culverts to maintain hydric soils and support wetland dependent plant species, the removal of this obsolete infrastructure may improve site drainage and reduce the extent of the wetland. It is not anticipated that this work will alter species composition, or wetland function. However, site rehabilitation does have the potential to result in adverse, site-specific, and short – to long-term, negligible to moderate impacts if site conditions after removal of infrastructure no longer support the wetland in its current condition.

Short term impacts to individual plants within the wetland may occur during project implementation, but natural recovery and active revegetation will mitigate this impact. Restoration of natural topography and vegetation is anticipated to result in beneficial, long-term, site-specific, negligible to moderate impacts to native vegetation, including the plant community within the wetland.

Cumulative Impacts. Construction of the Boulder Creek campground and associated road resulted in the placement of fill materials that altered water flow in the project area. It is possible that this has resulted in the expansion of wetland vegetation and soils in the campground. Development both within and outside of the park has resulted in the reduction in the extent and quality of wetland habitat in the region and across the country. No reasonably foreseeable future projects in the Elwha watershed are designed to fill wetlands. Although the Boulder Creek Trail and Campground Rehabilitation Project does not include filling wetlands, it is intended to restore natural topography and surface water flow. This may result in the diminishment of wetland vegetation and soils when abandoned infrastructure that may be contributing to the presence and extent of the wetland is removed, and site drainage is improved.

Wilderness Character

The selected action will result in beneficial, long-term, site-specific and local, minor to moderate impacts to wilderness character due to the removal of the asphalt trail surface, removal of infrastructure from the Boulder Creek campground, and active restoration and revegetation along the trail corridor, in the campground, and the former campground parking lot. Implementation of a ban on campfires and wood collection will help restore the natural quality of denuded areas. Construction activities will result in adverse, short-term, local and regional, moderate to major impacts to wilderness character due to noise generated by heavy equipment and helicopter use within potential wilderness and adjacent to designated wilderness areas.

Adverse, site-specific, local and regional; short term and long term; minor to major impacts may occur due to the potential need to use a heavy lift helicopter for the initial delivery of a footlog for the stream crossing Hell Creek, and the delivery of a 50 foot long bridge to Cougar Creek and a 150 foot long bridge to Crystal Creek; and also for the subsequent replacement of the footlog

when it deteriorates or is damaged during high water events. If these materials can be delivered up the trail, the noise impacts would be reduced.

Cumulative Impacts.

Olympic National Park is 95% designated Wilderness. Olympic National Forest also contains extensive lands within the Wilderness Preservation System. Application of the Minimum Requirements/Minimum Tool decision process has resulted in the installation and retention of various types of infrastructure and uses in Olympic National Park wilderness areas. A Wilderness Management Plan is proposed for Olympic National Park, with work anticipated to start in 2010. Pending legislation may designate the Boulder Creek Trail and surrounding area as wilderness, where it is not already included in the Wilderness Preservation System.

Cultural Resources

Ground disturbing activities related to the expansion of parking and vehicle turnaround space at the trailhead, removal of asphalt and culverts from the trail, and removal of asphalt, exposed concrete foundations, and soil scarification to prepare the area for revegetation all have the potential to uncover or disturb surface and buried archeological resources. This could result in the physical destruction, damage, or removal of these objects. The selected action will re-establish and delineate up to seven campsites within the CCC loop of the Boulder Creek campground, in addition to four sites in the non-historic mid-loop, with the potential to adaptively re-use this area in a manner that restores and protects this cultural landscape.

Cumulative Impacts. Many projects occurring throughout the park and the Elwha area are occurring that have the potential to affect cultural resources. Actions are evaluated individually pursuant to the National Historic Preservation Act, and are considered cumulatively to ensure that the park does not take actions with the potential to impair cultural resources within Olympic National Park.

Socioeconomic Concerns

Implementation of the Boulder Creek Trail and Campground Rehabilitation project will result in beneficial, short-term, local and regional, negligible to minor impacts due to the increased spending associated with trailhead expansion, asphalt removal, trail development, and trail and campground revegetation. This is due to increased economic activity associated with workers hired to implement the project contributing to the local economy by making use of area lodging, restaurants, grocery stores, and other businesses if the workers are from outside of the area, and also by supporting employment of local residents if work is conducted by people from the adjacent region.

Cumulative Impacts. Implementation of portions of this project as part of the American Recovery and Reinvestment Act (ARRA) will cumulatively generate additional socioeconomic activity in areas where ARRA-funded projects are funded and implemented.

Visitor Use and Experience

Construction of additional parking and expanded vehicle turnaround space at the trailhead will result in beneficial, site-specific, long-term, minor to moderate effects. Removal of the asphalt

and failed culverts from the trail, removal of abandoned infrastructure in the campground, and revegetation along the trail corridor, in the campground, and the former campground parking lot will result in beneficial, site-specific and local, long-term, minor to major impacts. Restoration of stock access to the Olympic Hot Springs area and Boulder Creek Campground will result in beneficial effects to visitors who use pack stock or enjoy sharing the trail with pack stock users. Visitors who consider use of pack stock to be an incompatible use of the trail will consider restoration of stock access as an adverse effect. Implementation of a campfire ban and ban on the collection of firewood will result in adverse, local, short-term, minor to major impacts due to the change in policy and resistance by some visitors to adhere to this requirement. The ban will result in beneficial, local, long-term, minor to major impacts due to the successful restoration of impacted areas within the campground, and the development of a visitor experience more consistent with management of the area as a wilderness area.

Adverse, site-specific and local, short-term, minor to moderate impacts to visitor use and experience will occur during project implementation due to temporary closures and noise impacts in areas adjacent to construction from heavy equipment use and helicopters. It is anticipated that the majority of necessary trail closures related to the Boulder Creek Trail and Campground Rehabilitation Project will occur during the implementation of the Elwha Dam Removal Project. This will eliminate or reduce the amount of time that visitors are unable to access the Boulder Creek area as a result of project activities.

In addition to the impacts described above, additional beneficial, site-specific, long-term, minor to moderate impacts would occur due to the restoration of approximately 19 out of 30 campsites in the Boulder Creek Campground. Construction of a day-use stock hitching rail and overnight stock campsite with hitching rail or high line system near the former campground parking lot will further expand visitor opportunities. Retention of up to seven campsites in the east (CCC) campground loop and up to four campsites in the mid-loop will allow for continued backpacking use of the area, and will include up to three designated group campsites.

Cumulative Impacts. The Olympic Hot Springs Resort and automobile campground provided relatively easy access for visitors to the area and residents. Establishment of Olympic National Park created visitor expectations that may differ from what people might seek in National Forest recreation areas, or from recreational opportunities on non-federal public lands. Closure of the Olympic Hot Springs Resort and loss of automobile access to the campground altered previous visitor use patterns in the area. Construction of extensive trail networks, such as the Olympic Discovery Trail, provides hikers, bicyclists, and equestrians with varying experiences on the northern Olympic Peninsula. Continued construction of the Olympic Discovery Trail, both within and outside of park boundaries will expand non-motorized, multiple use trail options. Removal of the Elwha and Glines Canyon dams may have some adverse effects on visitor use for some, but will provide a unique visitor experience that others will seek out. Implementation of the Boulder Creek project will improve opportunities for day hikers, equestrians, and backpackers by restoring safe access along the 2.2 mile stretch of the Boulder Creek Trail.

Soundscapes

Construction activities will result in adverse, short-term, local and regional, minor to major impacts to soundscapes due to noise generated by heavy equipment and helicopter use adjacent to designated wilderness areas.

In addition to impacts described above, adverse; site-specific, local, and regional; short term and long term; minor to major impacts may occur due to the need to use heavy lift helicopter for the initial delivery of a footlog for the stream crossing Hell Creek, and the delivery of a 50 foot long bridge to Cougar Creek and a 150 foot long bridge to Crystal Creek; and also for the subsequent replacement of the footlog when it deteriorates or is damaged during high water events. If transport by truck is feasible, this method will be utilized and the associated noise impacts will be reduced.

Cumulative Impacts.

Natural soundscapes have been altered by the expansion of human use and development both within and outside of the park. The construction of roads and trails, visitor centers, resorts, residential and business areas have all added sounds to the acoustic environment that did not previously exist. Noise related to the removal of the Elwha and Glines Canyon dams will be noticeable during project implementation. Noise from visitor use would be reduced during this time due to less access due to closures during construction. Noise from aircraft outside the park would continue. Noise generated from park activities will also continue. Reduction in the number of campsites in the Boulder Creek campground may result in a slight improvement to the acoustic environment by reducing the number of people using this site at one time.

Scenery and Visual Resources

Removal of abandoned infrastructure and asphalt and active revegetation and restoration of natural contours and native plants along the trail corridor, in the campground, and the former campground parking lot will result in beneficial, site-specific and local, long-term, minor to moderate impacts.

For some visitors the use of a footlog and stock fords will result in a more scenic trail experience at Hell Creek. For other visitors, the presence of the 50 foot long bridge at Cougar Creek and the 150 foot long bridge at Crystal Creek will provide an opportunity to gain a different view of the trail from the bridge decks, while for others the steel bridges may be seen as a visual intrusion.

Cumulative Impacts. Scenery and visual resources were impacted by the partial removal of infrastructure associated with the Olympic Hot Springs Resort and automobile campground. Damage to the Boulder Creek Trail due to the loss of the road surface at stream crossings has resulted in a deteriorated asphalt surface that is inconsistent with visitor expectations in a national park backcountry setting. Temporary impacts to scenery and visual resources may be expected during the removal of the Elwha and Glines Canyon dams, and the construction of other projects within the Boulder Creek and surrounding areas. Some visitors enjoy seeing construction activities, while others are distressed by the presence of heavy equipment in what is perceived by some as a pristine natural setting. Following the completion of the dam removal project, many visitors will enjoy seeing the recovery of the Elwha River watershed, particularly the transformation of the former reservoirs into vegetated riparian and upland habitat.

Improvements to the Boulder Creek Trail and Campground will contribute to the overall improvement of scenery and visual resources in the area.

Park Operations and Safety

Adequate vehicle turnaround space at the trailhead will result in beneficial, site-specific, long-term minor to moderate impacts due to improved access for vehicles with a larger turning radius, and reduced potential for vehicular accidents. Improved safety for recreational and administrative use will result from construction of safe pedestrian and pack stock accessible stream crossings at Cougar, Hell, and Crystal Creeks. Implementation of a campfire ban and a ban on the collection of firewood will require a commitment of park law enforcement resources to ensure compliance with this new requirement. This will require either the hiring of additional law enforcement rangers or reallocation of ranger patrol time to the Boulder Creek area.

Increased annual and cyclical maintenance needs will be required in order to maintain a stock ford at Hell Creek. When the footlog has deteriorated or is destroyed by high water events, it will require location of a replacement log, and transportation of the log to the stream crossing site. This may include the use of heavy-lift helicopters and the associated risk to staff. Pedestrian crossings at the footlog will only be safe during relatively low-water periods, as placement of the log will not be expected to provide clearance above the ordinary high water levels. Reduced maintenance will be required in the Boulder Creek campground, where only eleven out of an estimated thirty campsite areas will be retained. Extensive work to propagate plants for use in revegetation will be required. Substantial work will also be necessary to scarify compacted soils along the trail and throughout the campground and former campground parking lot in preparation of revegetation. . Increased visitor safety and operational efficiency will be gained by the installation of a 150 foot long bridge at Crystal Creek. The bridge will provide additional clearance during high water events and will require less maintenance.

Cumulative Impacts.

Olympic National Park manages an extensive program of natural and cultural resource management while providing for visitor enjoyment. Many projects have occurred over the decades of the park's existence to improve park operations and safety. The Olympic Hot Springs Resort was closed due to operational needs. The current Boulder Creek Trail was constructed as a road to provide automobile access, but was closed when stream crossings washed out to protect visitor safety. Implementation of the proposed activities would improve visitor safety and park operations, primarily through the construction of safe stream crossings.

Non-Impairment of Park Resources and Values

The fundamental purpose of the national park system established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or minimize to the greatest degree practicable, adverse impacts to park resources and values. Congress has given NPS managers direction, however, to allow impacts to park resources and values when necessary and appropriate to fulfill the purpose of the park, so long as the impact does not constitute impairment of the affected resources and values.

The prohibited impairment is an impact that would, in the professional judgment of the responsible NPS manager, harm the integrity of park resources or values, including opportunities that would otherwise be present for the enjoyment of those resources or values. An impact would more likely constitute impairment when it has a major or severe adverse effect upon a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishment legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents.

Chapter 3 of the Boulder Creek environmental assessment (EA) includes a determination on impairment in the conclusion statement of all applicable impact topics. Impairment statements are not required for recreational values/visitor experience, park operations, or health and safety topics. The analysis documented in the EA found that no park resources or values would be impaired by the selected action.

Basis for Decision

Based on the environmental assessment, analyses of issues and alternatives, together with consideration of public interest and the mandates of federal laws and policies for managing national parks, the ability of the mitigation measures to avoid or minimize adverse impacts, and the concurrence of agencies with technical expertise and permitting authority, the NPS will implement its selected action as described in this FONSI for the Rehabilitate Boulder Creek Trail and Campground EA.

It is the determination of the National Park Service that the selected action does not constitute a major federal action significantly affecting the quality of the human environment, nor is this project without precedent or similar to projects that normally require an environmental impact statement. The selected action to rehabilitate the Boulder Creek trail and campground while providing enhanced visitor services and active revegetation will further the resource management and visitor experience goals identified in the Olympic National Park 2008 General Management Plan. Therefore, in compliance with the National Environmental Policy Act, the National Park Service will not prepare an environmental impact statement, and will proceed with implementation of the project as soon as practicable.

Recommended: Karen Gustin 1/14/10
Karen Gustin
Superintendent
Olympic National Park
Date

Approved: Rory Westberg 1-15-2010
Rory Westberg
Acting Regional Director
Pacific-West Region, NPS
Date

ERRATA SHEETS

The following text is included to correct inaccuracies or missing information in the December 18, 2008 Rehabilitate Boulder Creek Trail and Campground Environmental Assessment. These errata sheets in combination with the original EA form the completed EA.

- On page 4 the EA stated that designated wilderness is located 100 feet from the centerline of the Boulder Creek Trail (former road). This distance is common for small roads within the park. This distance should be corrected to state that the wilderness designation for the Boulder Creek trail corridor established a set-back of only 25 feet from the trail. This correction also updates the description of Wilderness on page 107. This correction does not alter the project description or the effects determination. Work in the trail corridor to remove asphalt and complete rehabilitation will not occur in designated wilderness. Noise impacts to adjacent wilderness character are detailed in the EA.
- The EA did not address impacts of construction to the existing Hot Springs Road, or how these impacts will be mitigated. This topic was discussed by park staff during project development, but was unintentionally left out of the EA. The following paragraph should be inserted on page 131 of the EA:

Project activities will have a cumulative adverse impact on the Hot Springs Road, in combination with background weathering and visitor and administrative use. Work to implement the Boulder Creek Trail and Campground Rehabilitation project is expected to occur entirely or partially during the same period of time that the Elwha Dam Removal project is being implemented. Impacts to the Hot Spring Road will occur as a result of dam removal, and also from the Boulder Creek Project. Funds to repair and maintain park roads are sought on a recurring and cyclical basis. A funding proposal to rehabilitate the road after both projects have been completed has been made, and is currently anticipated to occur in 2015.

- The EA did not address where stock trailers will park after using the new vehicle turnaround and unloading at the new stock staging area. This topic was discussed by park staff during project development, but was unintentionally left out of the EA. The following paragraph should be inserted on page 53 of the EA.

Overflow parking along the road shoulder will continue to be used by larger vehicles and stock trailers. The road was assessed to determine if additional parking space is available. The nearest location where site conditions would support development of expanded parking is several miles down the road. Although development of remote parking was not considered in the EA, it may be considered in the future if visitor use patterns indicate that additional parking is needed. Alternately, the park may reconsider the need to pursue alternative transit for the Elwha area to alleviate parking demand at the Boulder Creek Trailhead if visitor experience or resource protection objectives are not being met.

- The list on page 135 of organizations and businesses that received notification that the EA was available for review was incorrect. The correct list is provided below.

Organizations and Businesses

Backcountry Horsemen of Washington, Peninsula Chapter
Bicycle Alliance of Washington
Cascade Bicycle Club
Conservation Northwest
Forks Chamber of Commerce
Forks Forum
Friends of Lake Crescent
Friends of Olympic National Park
Green Crow Timber LLC
KMAS Radio
KONP Radio
KXRO/KDUX Radio
National Audubon Society
National Parks Conservation Association
Nisqually National Wildlife Refuge
Olympic Peninsula Visitor Bureau
Olympic Forest Coalition
Olympic Natural Resource Center
Olympic Park Associates & North Cascade Conservation Council
Olympic Peninsula Audubon Society
Outdoor Recreation Info Center (REI)
Peninsula Daily News
Port Angeles Regional Chamber of Commerce
Port Angeles – Victoria Visitor Bureau
Port Townsend Leader
Protect the Peninsula’s Future
Rainier Evergreen, Inc.
Seattle Times
Sequim Chamber of Commerce
Sequim Gazette
Sierra Club, Cascade Chapter
Sunnydell Shooting Grounds
The Evergreen State College
The Wilderness Society
Washington Environmental Council
Washington’s National Park Fund
Wilderness Watch