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Draft Environmental Impact Statement Summary

Dosewallips Road Washout Project

Hood Canal Ranger District, Olympic National Forest
Olympic National Park
Jefferson County, Washington

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**Federal Highway
Administration**



Draft Environmental Impact Statement Summary

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SUMMARY

Introduction

The Dosewallips Road Washout Project (DRWP) addresses conditions created by a storm in January 2002 which washed away a portion of Forest Service Road (FSR) 2610. Subsequent storms also damaged a portion of Olympic National Park's (ONP's or park's) Dosewallips Road about 4 miles west of the damage on FSR 2610. Reestablishing road access is needed to restore motorized access to developed recreation facilities on both the Olympic National Forest (ONF) and ONP thereby meeting Forest objectives and desired conditions as identified in the Olympic National Forest Land and Resource Management Plan (1990) and park goals and mission. This draft environmental impact statement (DEIS) assesses three alternatives for reestablishing road access on FSR 2610, with the proposed repair on the Dosewallips Road in the park being consistent with each alternative. The Olympic National Forest (ONF) of the U.S. Forest Service and Western Federal Lands Highway Division (WFLHD) of the Federal Highway Administration (FHWA) are co-lead agencies in the preparation of this DEIS, and the Olympic National Park (ONP) is a cooperating agency. Collectively all three are referred to as the Agencies.

Project Location

Project areas are located on the Hood Canal Ranger District of the ONF, and on the ONP; both in Jefferson County, Washington. Proposed Forest Service (FS) activities are located along FSR 2610 about 10 miles west of Brinnon, Washington and Highway 101. The project area is bounded on the north by the Buckhorn Wilderness, on the south by The Brothers Wilderness, and is within the Dosewallips Key Watershed (77,800 acres) as identified in the Northwest Forest Plan Record of Decision (USDA/USDI 1994). The legal description is Township 26 North, Range 3 West, Sections 16 and 17. Proposed park activities are located along its Dosewallips Road about 4 miles west of the FS project area, legal description is Township 26 North, Range 4 West, Sections 23 and 24.

Background

During a storm in January 2002 approximately 310 feet of FSR 2610 washed out. The washout size had increased to slightly over 500 feet as measured in December 2007. The washout cut off road access to approximately 5 miles of FS and ONP roads which had provided access to the ONF Elkhorn Campground and the ONP Dosewallips Ranger Station, campground, and several trailheads. FSR 2610 and the Dosewallips Road provide one of two motorized access portals into ONP on the east side of the Olympic peninsula.

FSR 2610 is a single lane road with turnouts, surfaced with aggregate (crushed rock). This road up to Elkhorn Campground, which includes the washout section, is maintained for passenger cars (FS maintenance level 3).¹ Prior to the washout it had provided access to Elkhorn Campground for vehicles pulling trailers and recreational vehicles (RVs). In 2001 approximately 1900 people used campsites at Elkhorn.

In May 2002 the FS prepared an environmental assessment (EA) to analyze management alternatives for responding to the conditions created by the washout. Based on a need for additional information that EA was revised in February 2003. After a public comment period on the February 2003 EA a decision was made in March 2004 to reestablish road access via a reroute located upslope and north of the washout. This decision was subsequently withdrawn to complete a more detailed analysis, which is documented in this draft environmental impact statement (DEIS).

In late 2003 about 120 feet of the Dosewallips Road in the ONP at Milepost (MP) 0.85 (0.85 mile from the park boundary and about 4 miles from the washout on FSR 2610) near the Dosewallips Falls sustained damage when log retaining walls failed. These cedar log retaining structures were constructed in the 1940's along a very steep area of the exposed bedrock side channel and supported the outbound lane of the road. Failure of the retaining structures resulted in slumping of the road fill material.

The Dosewallips Road is an extension of FSR 2610 that dead-ends in the park. It is a single lane road with turnouts, surfaced with aggregate, and is maintained at park primitive road standards. A steep section of the road in the vicinity of the road failure is not recommended for large RVs and vehicles pulling trailers. Prior to the washout and road failure it had provided access to the Dosewallips Campground, Ranger Station and several trailheads. In 1999 approximately 4300 vehicles used the road annually, and in 2001 use levels were at about 200 vehicles per day (counted in both directions). The road also provided motorized access for park trail maintenance operations on the east side of ONP and a helicopter search and rescue base located near the campground.

Purpose and Need for Action

Existing Condition

FSR 2610 has washed out at about MP 3.1, and the ONP Dosewallips Road at MP 0.85 beyond the park boundary is damaged and nearly impassible due to a failure of the road's log structure retaining wall. These two roads had provided motorized access to both ONF and ONP recreational facilities along the Dosewallips River, including the Dosewallips Campground and trailhead where the Dosewallips Road dead-ends in ONP.

Desired Condition

¹ Maintenance Level 3 – Road is open to public travel and is maintained for passenger car use.

The desired condition is to restore public and administrative motorized access to pre-washout standards on FSR 2610 and ONP Dosewallips Road to existing FS and ONP recreational facilities along the Dosewallips River. Access for passenger cars, vehicles pulling trailers, and RVs would be provided to Elkhorn Campground, with passenger car access to Dosewallips Campground, Ranger Station, and trailheads.

Project Purpose

Based on the established need as identified by the difference between the existing and desired conditions for FSR 2610 and Dosewallips Road the purpose of this project is to reestablish road access on FSR 2610 and Dosewallips Road to ONF and ONP recreational facilities.

This project is consistent with direction in the 1990 ONF Land and Resource Management Plan (Forest Plan), as amended. The Forest Plan established management prescription *A3 Developed Recreation Sites and Administrative Sites* for the Elkhorn Campground area. This management prescription is dependent on the road access provided by FSR 2610. The Forest Plan also identified this site for reconstruction/expansion to meet the projected increase in demand for developed campgrounds (USDA 1990a). The Northwest Forest Plan amendment (USDA/USDI 1994) also provides management direction for the project area, identifying the area as Late-Successional Reserve and Riparian Reserve. This direction envisions that existing uses and developments will remain as maintenance of existing facilities is expected to have less effect on current old-growth conditions than development of new facilities.

The park's road system, in this case the Dosewallips Road, is managed to facilitate accomplishment of park purpose, significance, and mission. Park roads are intended to enhance visitor experience while providing safe and efficient accommodation of park visitors and to serve essential management access needs. Roads are both a means and an end for visitors – they enable one visitor to reach a desired goal, for another they are the goal. FSR 2610 and ONP Dosewallips Road help meet the ONP mission as they provide one of the two motorized access points on the east side of the park. The roads provide access for a more primitive recreational experience for park visitors than those found at the more developed sites with road access elsewhere in the park. This assists the park in meeting its goal of providing a wide range of recreational opportunities.

Proposed Action²

The FS and WFLHD propose to meet the purpose and need by rebuilding the damaged portion of FSR 2610 and Dosewallips Road to their condition prior to the storm events. Initially the proposed action was to rebuild FSR 2610 through the washout area with a low-water crossing, which was formerly Alternative E. However Alternative E was dropped from further consideration and now the proposed action is Alternative B. With Alternative B FSR 2610 would be rerouted along the hillslope above and to the north of the washout to

² A proposed action is a proposal to authorize, recommend, or implement an action to meet a specific purpose and need. It is formed at that stage in the development of an action when agencies, in this case the FS, WFLHD, and NPS, have a goal and are actively preparing to make a decision on one or more alternative means to accomplish that goal (40 CFR 1508.23).

restore access for passenger cars, recreational vehicles, and vehicles pulling trailers. Approximately 0.84 mile of single lane road with turnouts would be constructed using standard construction methods. At the damaged site on Dosewallips Road approximately 120 feet of road would be repaired and reconstructed to current road standards. A retaining wall would be constructed and no in-stream work would be required.

Should Alternative B be selected, then the ONF would need to include a proposal for non-significant Forest Plan amendments, which would waive compliance with certain standards and guidelines for Late-Successional Reserves and Riparian Reserves as identified in the Record of Decision for the Northwest Forest Plan.

Management Direction

ONF management direction is primarily provided by the Forest Plan. The Northwest Forest Plan is a major amendment to the Forest Plan and provides the following management direction.

- Late-Successional Reserves (LSR): The objective of this land allocation is to protect and enhance conditions of late-successional and old-growth forest ecosystems. The project area is within the Hood Canal North LSR.
- Riparian Reserves (RR): This allocation consists of portions of watersheds where riparian-dependent resources receive primary emphasis, which are required for maintaining hydrologic, geomorphic, and ecological processes that directly affect waterbodies. The entire ONF project area was considered to be within this allocation.
- Key Watershed: This is a component of the Northwest Forest Plan's Aquatic Conservation Strategy (ACS) and is a system of large refugia comprising watersheds that are crucial to at-risk fish species and provide high quality water. The Dosewallips watershed is a Tier 1 Key Watershed.

ONP activities are directed primarily from their Master Plan (NPS 1976) and the ONP: Statement for Management (NPS 1996). The proposed repairs are consistent with these planning documents. Currently ONP is in the process of revising their general management plan. ONP issued a *Draft General Management Plan/Environmental Impact Statement* (May 2006) in June of 2006. The Final General Management Plan/Environmental Impact Statement and Record of Decision is expected sometime in 2008. While ONP has not selected an alternative, the proposed action is consistent with ONP's preferred alternative identified in their draft plan.

Issues

In addition to issues identified by the Agencies, comments from the public, other agencies, and tribes were used to identify issues concerning the proposed action that are truly significant to the action and thus deserving of study. The identified issues will also be used to aid in distinguishing and comparing the alternatives. The final decision will be based on a comparison of the respective alternative's ability to address the identified issues as well as the overall purpose and need for the proposed action.

Road Management

The proposed action would have short-term construction and long-term maintenance costs, and user safety is an important consideration.

Geotechnical and Geomorphic Processes

Concerns were expressed regarding the uncertainty of geotechnical conditions along the proposed reroute alternatives for FSR 2610, especially in the area of slope stability. Also an understanding of the geomorphic processes (those processes which create or shape land forms) is important in evaluating the alternatives, especially in the dismissal of those alternatives which would repair FSR 2610 approximately on the original road location along the river. Geomorphic processes have the potential to affect future structure failures and sediment supply.

Soil Productivity

Some concerns were expressed that newly constructed or reconstructed roads have the potential to locally reduce soil productivity and negatively impact site productivity, water quality and aquatic habitat conditions. These and other associated management activities could result in soil compaction, surface erosion, mass wasting (such as landslides), modifications of surface and subsurface hydrology, alteration of wetland functions, and sedimentation into nearby streamcourses. Others think that these concerns can be addressed through appropriate project design and implementation of mitigation measures.

Aquatic Species and Habitat Conditions

Fish bearing streams within the project area include the Dosewallips River and an unnamed tributary located just downstream of the washout. Some are concerned that road reconstruction may alter channel dynamics, sediment delivery, and riparian conditions in these waterbodies. They think the proposed action could affect the amount and quality of spawning and rearing habitat for a number of anadromous fish species, including Endangered Species Act (ESA) listed Chinook salmon. Others think that road access can be restored in an environmentally acceptable manner and that effects to aquatic habitat can be kept to acceptable levels through project design and mitigation measures.

Terrestrial Species and Habitat

Some are concerned that proposed activities may affect Threatened and Endangered (T&E) species; FS Sensitive species; Management Indicator Species (MIS); Species of Concern; the habitat functions of Late-Successional Reserves; or the functions of marbled murrelet and northern spotted owl critical habitat units. Others think that road access can be restored in an environmentally acceptable manner and the effects to terrestrial wildlife and habitat can be kept to acceptable levels through project design and mitigation measures.

Botanical Species and Habitat

Concerns were expressed that project activities have the potential to affect botanical species and habitat.

Invasive Plants

There are existing populations of invasive plants in the project area. Road construction activities, resulting in the exposure of mineral soil, create conditions favorable to the spread of invasive plants.

Access and Recreation Use

There are concerns with reestablishing the road and thereby allowing motorized access past the washout area. Some think that non-motorized access past the washout area provides opportunities to enjoy the features of the area (river corridor and adjacent wilderness areas) in a quieter and more slow-paced manner. They think the relatively easy walk on the road past the washout provides a valuable, low-elevation hiking opportunity. Others believe it is important to provide road access past the washout in order to provide access to all users and not restrict visitation to those physically able or having the time to make the walk past the washout. They want everyone to be able to experience the more remote Forest and park areas that exists past the washout.

Wilderness

Project activity is proposed within a narrow corridor between the Buckhorn and The Brothers Wildernesses. While no activities are proposed within the Wilderness areas themselves, there could be impacts to wilderness values.

Social/Economic

Some have expressed concerns with respect to the social and economic effects of on-going restricted access past the washout to the communities along Highway 101 in the vicinity of the Dosewallips River. They think that road access to Forest and park recreational facilities past the washout are an important aspect of the local and southern Jefferson County economies. Others think that the economic impacts of the restricted access are overstated and that reopening the road would cost too much.

Visual Quality (ONF only)

Proposed activities could affect the visual quality of the project area.

Climate Change

Concerns were expressed regarding the potential for increasing stream flow conditions as a result of climate trends and how this would relate to the risk of future road washouts.

Soundscapes (specific to ONP)

A National Park Service (NPS) policy states that the NPS will strive to preserve the natural quiet and natural sounds associated with the physical and biological resources of parks. The noise associated with the proposed repair on ONP land could temporarily adversely affect park resources by modifying or intruding upon the natural soundscape.

Park Operations (specific to ONP)

Park operations refer to the quality and effectiveness of their facilities. For the proposed project, an issue was developed regarding the park's ability to maintain the Dosewallips Road in order to adequately protect and preserve vital resources, maintain existing facilities and trails in the Dosewallips area, and provide for a successful visitor experience.

Forest Plan Amendments

All action alternatives include non-significant amendment(s) as defined under the National Forest Management Act (NFMA) to the 1990 Olympic National Forest Land and Resource Management Plan. The need for these amendments is due to changed physical conditions, i.e. the road washout. These proposed amendments are site-specific and only apply to the Dosewallips Road Washout project area.

The amendments involve plan components established in the 1994 Northwest Forest Plan Record of Decision (1994 NWFP ROD). The implementation section of the 1994 NWFP ROD (E-18) states "Changes or adjustments to these standards and guidelines may be made through amendments to those plans [Forest Plans] required by regulations as described above. The authority to change or amend those plans remains as specified in applicable regulations. The amendments will be reviewed by the Regional Interagency Executive Committee to assure consistency with the objectives of these standards and guidelines". A review by the Regional Interagency Executive Committee will be conducted prior to the Olympic National Forest Supervisor signing a ROD for this proposed project.

Alternatives Evaluated in Detail but Eliminated from Consideration

Although Alternatives D and E were evaluated in detail by the interdisciplinary team (IDT)³ they were eventually eliminated from further consideration. In a December 20, 2006, interagency meeting the Agency executives considered the results of the IDT alternative evaluations and scoping input from National Oceanic Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS). NMFS stated serious concerns about replacing

³ An interdisciplinary team is an interagency team of experts such as biologists, geologists, engineers, etc. who help to develop the project and study its effects.

the washed-out road into the Dosewallips River channel, as this potential placement could result in a serious long-term affect so great as to jeopardize the continued existence of the Puget Sound Chinook salmon Evolutionary Significant Unit (ESU). Based on their review the Agency executives determined that the two alternatives (Alternatives D and E) which propose establishing the road bed into the river channel have unacceptable environmental impacts and will be dismissed from further consideration.

A more complete description of these alternatives can be found in Appendix A, and a detailed analysis can be found in Appendix B and project specialist reports.

Replace-in-Kind – Formerally Alternative D

This alternative would be designed to meet the project's purpose and need, minimize impacts to terrestrial habitats by avoiding the clearing associated with road construction in LSR, and minimize construction costs. This alternative would reestablish road access in the washout area as close to the preexisting conditions as possible.

A single lane road about 500 feet in length would be reconstructed similar to what existed prior to the washout. It would provide access for passenger cars, recreational vehicles, and vehicles pulling trailers. The horizontal alignment would swing into the hillside as much as possible without undercutting the slope while also providing sufficient catchment area at the base of the slope to accommodate bank sloughing and ravel. Near the upstream portion of the washout the road fill would occupy about one-half of the existing bankfull channel width. The bluff slope would be laid back to a slope angle of 1 horizontal:1 vertical to create a more stable slope. This would require moving the top of the slope back about 60 feet and removing about 0.7 acre of ground. There would be clearing of danger trees for approximately 100 feet from the top of the laid back slope, involving about 1 acre of forest within LSR. Road bank protection (most likely in the form of rip rap) would extend along the new construction area and approaches for a distance of about 680 feet.

This alternative would also include mitigation activities of the construction of approximately five constructed log complexes near the project area. These complexes are designed to dissipate the increased flow energy being translated downstream from the project site, redirect flow toward the south stream bank at the mid-level terrace to encourage channel migration in that direction and possible recruitment of spawning gravels and large wood from a high terrace, and create cover, rearing, and spawning habitat.

The cost of road construction, including construction related road maintenance and log jam mitigation, was estimated at \$1.72 million (estimate was made in the spring of 2006 and has not been updated).

This alternative would include two site-specific, non-significant amendments to the Forest Plan. These amendments are associated with Aquatic Conservation Strategy (ACS) objectives and management direction for Key Watersheds.

Additionally ONP and WFLHD would repair the Dosewallips Road at MP 0.85 in the

vicinity of the Dosewallips Falls, at an estimated cost of \$350,000. Approximately 120 feet of road that was constructed in the 1940's on log retaining wall/structures failed in late 2003. The road would be repaired by removing the old road fill material and reconstructing the road prism by using riprap and crushed rock to form a foundation on which structural backfill would be constructed. Stabilization techniques would be used to protect the stabilized fill from erosion. All of the construction would be above the ordinary high water line of the river. The park would need to conduct road maintenance that has been deferred on the Dosewallips Road prior to the repair work at an estimated cost of \$4,500.

Low-water Revetment – Formerly Alternative E

This alternative would be designed to meet the project's purpose and need, minimize impacts to terrestrial habitats by avoiding the clearing associated with road construction in LSR, and minimize construction costs. It would also lessen aquatic habitat and riparian function impacts by reducing the reconstructed road's encroachment into the river, thereby allowing some gravel recruitment from the high bank.

About 500 feet of single land road would be reconstructed. It would provide seasonal access for passenger cars, recreational vehicles, and vehicles pulling trailers. The horizontal alignment would be similar to former Alternative D and would swing into the hillside as much as possible without undercutting the slope, while also providing sufficient catchment at the base of the slope to accommodate bank sloughing and ravel. In the area close to the upstream portion of the washout the road fill would occupy about one-third of the existing bankfull channel width. There would be no scaling back of the bluff slope but there would be clearing of danger trees for approximately 100 feet from the top of the slope, involving about 1 acre of forest within LSR.

The height of the roadway surface would be at a grade to minimize the road's footprint while meeting design criteria for a 10-year flood (Q10). The design would be such that the road would be overtopped by the river during moderately large flood events, such as a 10-year flood.

The cost of road construction, including log jam mitigation, was estimated at \$1.40 million (estimate was made in the spring of 2006 and has not been updated). This alternative also would have long-term road maintenance needs due to slope ravel and repairs to the road's surface after flood events.

This alternative would include two site-specific, non-significant amendments to the Forest Plan. These amendments are associated with Aquatic Conservation Strategy (ACS) objectives and management direction for Key Watersheds.

Additionally ONP and WFLHD would repair the Dosewallips Road at MP 0.85 in the vicinity of the Dosewallips Falls, at an estimated cost of \$350,000. Approximately 120 feet of road that was constructed in the 1940's on log retaining wall/structures failed in late 2003. The road would be repaired by removing the old road fill material and reconstructing the road prism by using riprap and crushed rock to form a foundation on which structural backfill

would be constructed. Stabilization techniques would be used to protect the stabilized fill from erosion. All of the construction would be above the ordinary high water line of the river. The park would need to conduct road maintenance that has been deferred on the Dosewallips Road prior to the repair work at an estimated cost of \$4,500.

Alternatives Considered but Eliminated from Detailed Study

Alternatives to ONF Proposed Action

Southern Road

This alternative would establish road access beyond the washout site on the south side of the river by utilizing FSR 2610-010 (Six Mile bridge) and FSR 2610-012, and constructing a 2-mile connector road to FSR 2610-040 (Ten Mile bridge). This alternative was eliminated from detailed consideration for the following reasons: the route crosses The Brothers Wilderness (a Wilderness area boundary adjustment would require congressional approval), it is longer than the reroutes on the north side of the river (2 miles new construction and 2.5 miles reconstruction), the route crosses areas of very steep ground and cliff line, and the route crosses stands of late-successional character which are higher quality (than the re-route alternatives) because they are farther from existing roads than the late-successional stands crossed by two of the alternatives considered in detail.

Eight Percent Grade Reroute

This alternative would relocate FSR 2610 above and north of the current washout site utilizing an 8 percent grade to facilitate easier access for large recreational vehicles. This alternative was eliminated from detailed consideration because: an 8 percent slope road would construct approximately 50 percent more road than the reroute alternatives; would encroach on the Buckhorn Wilderness; vehicles would still have to negotiate the existing 18 percent grade to reach the facilities in the park (the park does not recommend large recreational vehicles or vehicles pulling trailers use this section of road); and an improvement to the previous road condition would not qualify for ERFO funding.

Wetland Avoidance

This alternative would relocate FSR 2610 above and north of the current washout site with an alignment that would avoid impacts to the wetlands located adjacent to FSR 2610 east of the washout. This alternative was eliminated from detailed consideration because: the reroute would have been longer with a greater impact on late successional reserve habitat and more of the reroute would have been on steep and potentially unstable slopes.

Decommission FSR 2610 and Convert to Trail

This alternative would decommission FSR 2610 and the park's Dosewallips Road above the washout and convert these roads to non-motorized trails. With this as the main theme several variations were suggested which included building new campground and ranger station facilities below the washout and constructing a new trail network to tie into the existing trail system above the washout. While the decommission/convert to trail alternative was considered in the 2003 EA, it was eliminated from detailed consideration in this analysis

because it would not meet the project's purpose and need of restoring road access for motorized vehicles on FSR 2610 to the ONF and ONP recreational facilities and the park's Dosewallips Road.

Footbridge

An alternative was proposed that would construct a footbridge over the washout area and utilize a shuttle system to transport visitors to Elkhorn Campground and the park's facilities. This alternative was eliminated from detailed consideration because it would not meet the project's purpose and need of restoring road access for motorized vehicles on FSR 2610 and the park's Dosewallips Road.

Light Traffic Bridge

A proposal was suggested to construct a bridge over the washout area that would be suitable for use by vehicles such as wheelchairs, all terrain vehicles (ATVs), and light pick-ups (to be used for administrative purposes). This alternative was eliminated from detailed consideration because it would not meet the project's purpose and need of restoring road access for motorized vehicles on FSR 2610 and the park's Dosewallips Road.

Private Land Purchase

A suggestion was made to include the purchase of private land in the lower Dosewallips River valley and the decommissioning of roads within these areas as part of the alternatives. This proposal is outside the scope of the decision to be made for this project and for this reason was eliminated from detailed consideration.

Reroute Alternatives with LSR/AMA Exchange Forest Plan Amendment

A variation of the two reroute alternatives (Alternatives B and C) was considered which proposed a Forest Plan amendment to redesignate a block of Adaptive Management Area (AMA) Forest Plan allocation to LSR to mitigate the removal of LSR acres under the reroute alternatives. A potentially suitable stand of AMA was identified near Mt. Turner but after a field visit to the stand the proposal was eliminated from detailed consideration because the stand has lower quality biological and physical features when compared to the area of LSR affected by the reroute alternatives.

Alternatives to ONP Proposed Action

Bypass

A suggestion was made to construct a bypass uphill of the failed section of road away from the Dosewallips River. This proposal was eliminated from detailed consideration because the side slope is extremely steep and rocky and the road would need to be constructed on a very steep grade, about 18 percent. The financial cost of this option would be too high, and the environmental impacts would be unnecessarily severe to restore this section of road.

Alternatives Considered in Detail

Alternative A - No Action

Objective

This alternative would allow current geological processes, including the continued deterioration of FSR 2610 and Dosewallips Road to continue with the associated risks and benefits. This alternative provides a baseline for comparison with other alternatives.

Description

Motorized access on FSR 2610 would end at or near the washout. Only measures to provide for public safety at the washout site would be implemented, such as blocking FSR 2610 to prevent a vehicle from plunging into the river. The road would be blocked with a traffic barrier (such as a jersey barrier) and would be signed to warn motorists of the road closure. Similarly, the Park's failed section of the Dosewallips Road near the Dosewallips Falls would not be repaired.

Current FS management plans would continue to guide management of the project area on ONF lands. Existing uses, such as parking along the edge of the road near the washout and in the adjacent dispersed camping area, would continue. The Elkhorn Campground would remain closed and would not be maintained.

On ONP lands, the Dosewallips Campground and restrooms would remain closed. The park's ranger station and quarters would continue to be closed or possibly converted to a backcountry site.

A future decision likely would be needed to determine appropriate management of the Forest and park roads and recreational facilities located beyond the washout.

Forest Plan Amendment

Selection of the No Action alternative would not require a site-specific non-significant amendment (as defined under the NFMA) to the Forest Plan.

Alternative B – Reroute 1 Bench Emphasis

Objective

This alternative is designed to meet the project's purpose and need by rerouting FSR 2610 past the washout site out of the river floodplain utilizing standard road construction techniques. This alternative was developed to minimize impacts to aquatic habitat and riparian function that would otherwise occur by allowing gravel recruitment from the high bank by the river.

Description

FSR 2610 would be rerouted along the hillslope above and to the north of the washout to restore access for passenger cars, recreational vehicles, and vehicles pulling trailers. Approximately 0.84 mile of single lane road with turnouts would be constructed using standard construction methods. Construction would occur over a 3-year period. Standard construction methods involve trying to balance cuts and fills with no particular emphasis on

minimizing the foot print of cleared area. Construction would involve the clearing of about 7.1 acres of LSR lands. Most of the route (95 percent) would be new road construction, with the remaining 5 percent following the alignment of an old timber harvest spur road. The road would have sustained grades up to a maximum of about 10 percent. Danger trees would be removed from within 100 feet of the top of cut or toe of fill.

The estimated cost to reconstruct FSR 2610 along this reroute is \$2.55 million. Estimated maintenance costs for the reroute would be \$33,900 for the first 2 years and annually \$2,000 long-term. Estimated deferred maintenance on FSR 2610 from the washout up to the park boundary would be \$15,400 initially, with long-term annual maintenance estimated at \$10,800.

During construction, FSR 2610 would be closed to the public from the Forest boundary up to the washout site to provide for public safety. Portions of FSR 2610 and previously disturbed dispersed camping areas (approximately 2 acres) near the washout would be used for construction equipment staging areas. The dispersed camping areas would be rehabilitated at the conclusion of construction activities. Rehabilitation would include soil improvement work, scattering of large wood, seeding/planting, and treatment for invasive species.

About 0.7 mile of FSR 2610, located on either side of the washout to the take off points for the reroute, would be decommissioned. The section of road to be decommissioned is in the riparian area, but not within the active (100 year) floodplain (see Figure 30). Decommissioning the section of road upstream of the washout would involve removal of drainage structures and the fill in draws and drainage pathways, but it is possible that not all of the fill that is present would be removed. The surfacing would be removed, the roadbed would be ripped or otherwise de-compacted and it would be replanted with appropriate native, woody vegetation. Decommissioning the section of road downstream of the washout would involve removal of drainage structures and the road fill to an extent to facilitate wetland restoration.

Additionally ONP and WFLHD would repair the Dosewallips Road at MP 0.85 in the vicinity of the Dosewallips Falls, at an estimated cost of \$350,000. Approximately 120 feet of road that was constructed in the 1940's on log retaining wall/structures failed in late 2003. The road would be repaired by removing the old road fill material and reconstructing the road prism by using riprap and crushed rock to form a foundation on which structural backfill would be constructed. Stabilization techniques would be used to protect the stabilized fill from erosion. All of the construction would be above the ordinary high water line of the river. The park would need to conduct road maintenance that has been deferred on the Dosewallips Road prior to the repair work at an estimated cost of \$4,500.

Forest Plan Amendments

Selection of this alternative would include five site-specific, non-significant amendments (as defined under the NFMA) to the Forest Plan. These amendments are to certain standards and guidelines for LSR (pre-project survey requirements, protection of murrelet habitat, neutral or beneficial requirement, and minimize adverse road impact requirements) and Riparian Reserves (wetland avoidance) as identified in the Record of Decision for the Northwest Forest Plan.

Alternative C – Reroute 2 Retaining Wall Emphasis

Objective

This alternative is designed to meet the project's purpose and need by rerouting FSR 2610 past the washout site out of the river floodplain. Instead of using standard construction practices as described for Alternative B, this alternative would narrow the road's footprint to limit the amount of clearing and excavation needed for the proposed construction. This alternative was also developed to minimize impacts to aquatic habitat and riparian function that would otherwise occur with eliminated Alternatives D and E by allowing gravel recruitment from the high bank by the river.

Description

This alternative would generally follow the same alignment as proposed under Alternative B. However, some slight shifts in grade and horizontal alignment may be used to help minimize disturbance in the LSR as compared to Alternative B.

FSR 2610 would be rerouted along the hillslope above and to the north of the washout to restore access for passenger cars, recreational vehicles, and vehicles pulling trailers. Approximately 0.84 mile of single lane road with turnouts would be constructed. Construction would occur over a 3 year period. Construction of retaining walls and potential reinforcement built into fills would minimize the disturbed area. About 6.5 acres of LSR as designated in the Forest Plan would be cleared, about 8 percent less disturbance than Alternative B. Most of the route (95 percent) would be new road construction, with the remaining 5 percent following the alignment of an old timber harvest spur road. The road would have sustained grades up to a maximum of about 10 percent. Danger trees would be removed from within 100 feet of the top of cut or toe of fill.

The estimated cost to reconstruct FSR 2610 along this reroute is \$3.76 million. Estimated maintenance costs for the reroute would be \$34,200 for the first 2 years and annually \$2,000 long-term. Estimated deferred maintenance on FSR 2610 from the washout up to the park boundary would be \$15,400 initially, with long-term annual maintenance estimated at \$10,800.

During construction FSR 2610 would be closed to the public from the Forest boundary up to the washout site to provide for public safety. Portions of FSR 2610 and previously disturbed dispersed camping areas (approximately 2 acres) near the washout would be used for construction equipment staging areas. The dispersed camping areas would be rehabilitated at the conclusion of construction activities. Rehabilitation would include soil improvement work, scattering of large wood, seeding/planting, and treatment for invasive species.

About 0.7 mile of FSR 2610, located on either side of the washout to the take off points for the reroute, would be decommissioned. The section of road to be decommissioned is in the riparian area, but not within the active (100 year) floodplain (Figure 30). Decommissioning the section of road upstream of the washout would involve removal of drainage structures and the fill in draws and drainage pathways, but it is possible that not all of the fill that is present would be removed. The surfacing would be removed, the roadbed would be ripped

or otherwise de-compacted and it would be replanted with appropriate native, woody vegetation. Decommissioning the section of road downstream of the washout would involve removal of drainage structures and the road fill to an extent to facilitate wetland restoration.

Additionally ONP and WFLHD would repair the Dosewallips Road at MP 0.85 in the vicinity of the Dosewallips Falls, at an estimated cost of \$350,000. Approximately 120 feet of road that was constructed in the 1940's on log retaining wall/structures failed in late 2003. The road would be repaired by removing the old road fill material and reconstructing the road prism by using riprap and crushed rock to form a foundation on which structural backfill would be constructed. Stabilization techniques would be used to protect the stabilized fill from erosion. All of the construction would be above the ordinary high water line of the river. The park would need to conduct maintenance that has been deferred on the Dosewallips Road prior to the repair work at an estimated cost of \$4,500.

Forest Plan Amendments

Selection of this alternative would include four site-specific, non-significant amendments (as defined under the NFMA) to the Forest Plan. These amendments are to certain standards and guidelines for LSR (pre-project survey requirements, protection of murrelet habitat, and neutral or beneficial requirement) and Riparian Reserves (wetland avoidance) as identified in the Record of Decision for the Northwest Forest Plan.

Alternative F – Bridge

Objective

This alternative is designed to meet the project's purpose and need, reduce impacts to the adjacent LSR as compared to Alternatives B and C, and lessen aquatic habitat and riparian function impacts by allowing a relatively normal degree of gravel recruitment by the river from the high bank.

Description

A single lane bridge, about 700 feet long spanning the washed out area, would be constructed to restore access to passenger cars, recreational vehicles, and vehicles pulling trailers. The bridge would be constructed of pre-cast spans, which would be supported by intermediate piers. There would be no scaling back of the bluff slope, but there would be clearing of danger trees for approximately 100 feet from the top of the slope, involving about 1 acre of forest within LSR.

The cost of bridge construction is estimated at \$8.75 million. Estimated annual bridge maintenance and inspections costs would be \$2,800. Estimated deferred maintenance on FSR 2610 from the washout up to the park boundary would be \$15,400 initially, with long-term annual maintenance estimated at \$10,800.

During construction periods FSR 2610 would be closed to public access from the Forest boundary up to the washout site to provide for public safety. Portions of FSR 2610 and previously disturbed dispersed camping areas (approximately 2 acres) near the washout would be used for construction equipment staging areas. The dispersed camping areas would

be rehabilitated at the conclusion of construction activities. Rehabilitation would include soil improvement work, scattering of large wood, seeding/planting, and treatment for invasive species.

Additionally ONP and WFLHD would repair the Dosewallips Road at MP 0.85 in the vicinity of the Dosewallips Falls, at an estimated cost of \$350,000. Approximately 120 feet of road that was constructed in the 1940's on log retaining wall/structures failed in late 2003. The road would be repaired by removing the old road fill material and reconstructing the road prism by using riprap and crushed rock to form a foundation on which structural backfill would be constructed. Stabilization techniques would be used to protect the stabilized fill from erosion. All of the construction would be above the ordinary high water line of the river. The park would need to conduct maintenance that has been deferred on the Dosewallips Road prior to the repair work at an estimated cost of \$4,500.

Forest Plan Amendment

Selection of this alternative would include one site-specific, non-significant amendment (as defined under the NFMA) to the Forest Plan. This amendment is to a standard and guideline for Riparian Reserves (wetland avoidance) as identified in the Record of Decision for the Northwest Forest Plan.

Environmental Consequences (Comparison of Alternatives)

ISSUE	ALTERNATIVE A No Action	ALTERNATIVE B Reroute 1 Bench Emphasis	ALTERNATIVE C Reroute 2 Retaining Wall Emphasis	ALTERNATIVE F Bridge
ROAD MANAGEMENT				
<u>Estimated Costs</u>				
• Construction	ONF = \$5,000 ONP = \$0	ONF = \$2,550,000 ONP = \$350,000	ONF = \$3,760,000 ONP = \$350,000	ONF = \$8,750,000 ONP = \$350,000
• Annual maintenance				
○ Short-term				
▪ Deferred	\$0	\$19,900	\$19,900	\$19,900
▪ 1 st 2 year	\$0	\$33,900	\$34,200	\$3,900
○ Long-term	\$0	\$11,000	\$11,000	\$3,900
○ Bridge inspection				\$1,200
<u>User Safety</u>				
	Block FSR 2610 with traffic barrier	Treat danger trees	Treat danger trees	Treat danger trees

ISSUE	ALTERNATIVE A No Action	ALTERNATIVE B Reroute 1 Bench Emphasis	ALTERNATIVE C Reroute 2 Retaining Wall Emphasis	ALTERNATIVE F Bridge
<p>GEOTECHNICAL HAZARDS AND GEOMORPHIC PROCESSES</p> <ul style="list-style-type: none"> • Slope stability • Fluvial processes • Sediment supply 	<p>Natural conditions</p> <p>Natural conditions</p> <p>Natural conditions</p>	<p>Segment 2 has areas of pre-existing slope movement and ground water seepage. Construction of new cuts up to 60 to 80 feet high could result in potentially unstable slopes and minor landslides. Natural conditions at the high bank would continue</p> <p>Same as Alt. A.</p> <p>Same as Alt A.</p>	<p>Same as Alt B.</p> <p>Same as Alt. A.</p> <p>Same as Alt A.</p>	<p>Similar to Alt A in the short-term. Continued shallow slope movement on high bank until stable angle naturally achieved.</p> <p>Similar to Alt A in the short-term. Reduced river effect on high bank in the long-term.</p> <p>Similar to Alt A in the short-term. Reduction in supply in the long-term.</p>
<p>SOIL PRODUCTIVITY</p>	<p>No additional road. 3.9 miles of abandoned road. 42 acres in detrimental soil condition with slow natural recovery. Erosion continuing on abandoned road. No effect to slope stability or hillslope hydrology.</p>	<p>0.84 mile of new road. 0.7 mile of road decommissioning. 44.7 acres in long-term detrimental conditions. Increased short-term erosion. Second highest risk of slope instability. Effects to hillslope hydrology.</p>	<p>0.84 mile of new road. 0.7 mile of road decommissioning. 44.1 acres in long-term detrimental conditions. Increased short-term erosion, higher than Alt. B. Highest risk of slope instability. Effects to hillslope hydrology, same as Alt. B.</p>	<p>700 foot long bridge. 42.0 acres in long-term detrimental conditions. Minimal surface erosion. Lowest risk of slope instability. No effect to hillslope hydrology.</p>

ISSUE	ALTERNATIVE A No Action	ALTERNATIVE B Reroute 1 Bench Emphasis	ALTERNATIVE C Reroute 2 Retaining Wall Emphasis	ALTERNATIVE F Bridge
AQUATIC HABITAT (Matrix Indicators: Project Scale/Watershed Scale)				
Temperature	M/M	M/M	M/M	M/M
Sediment	D/M	D (tribs) M (Dose)/M	D (tribs) M (Dose)/M	D/M
Large Woody Debris	M/M	D/M	D/M	M/M
Pool Freq and Quality	M/M	M/M	M/M	M/M
Off-channel Habitat	M/M	D/M	D/M	M/M
Width/Depth Ratio	M/M	M/M	M/M	M/M
Streambank Condition	M/M	M/M	M/M	D/M
Drainage Network	M/M	D/M	D/M	M/M
Road Density/Location	M/M	M/M	M/M	M/M
Function of Riparian Reserves	M/M	D/M	D/M	M/M
Puget Sound Chinook	No Effect	NLAA	NLAA	LAA
Chinook Critical Habitat	No Effect	NLAA	NLAA	LAA
Puget Sound Steelhead	No Effect	NLAA	NLAA	NLAA
Hood Canal summer chum	No Effect	NLAA	NLAA	NLAA
Summer chum Critical Habitat	No Effect	NLAA	NLAA	NLAA
Coastal Puget Sound bull trout	No Effect	NLAA	NLAA	NLAA

(M)aintain = project may affect indicator, but impact is neutral.

(D)egrade = project is likely to have a negative impact on the habitat indicator.

Tribes = tributaries

NLAA = Not Likely to Adversely Affect determination as made under the Endangered Species Act (ESA)

LAA = Likely to Adversely Affect determination as made under the ESA

ISSUE	ALTERNATIVE A No Action	ALTERNATIVE B Reroute 1 Bench Emphasis	ALTERNATIVE C Reroute 2 Retaining Wall Emphasis	ALTERNATIVE F Bridge
TERRESTRIAL HABITAT				
Northern Spotted Owl (NSO)	No habitat impact No Effect	Remove 7.1 acres suitable habitat (one activity center below habitat threshold); LAA	Remove 6.5 acres suitable habitat (one activity center below habitat threshold); LAA	Degrade 1 acre suitable habitat (one activity center below habitat threshold); 2.5 acres noise disturbance LAA
NSO Critical Habitat	No habitat impact No Effect	Remove 7.1 acres constituent element (nesting, roosting, foraging, or dispersal habitat) LAA	Remove 6.5 acres constituent element LAA	Degrade 1 acre constituent element LAA
Marbled Murrelet	No habitat impact No Effect	Remove 7.1 acres suitable habitat; 15.7 acres noise disturbance LAA	Remove 6.5 acres suitable habitat; 15.7 acres noise disturbance LAA	Degrade 1 acre suitable habitat; 2.5 acres noise disturbance LAA
MM Critical Habitat	No habitat impact No Effect	Remove 7.1 acres, constituent element LAA	Remove 6.5 acres, constituent element LAA	Degrade 1 acre of constituent element LAA

ISSUE	ALTERNATIVE A No Action	ALTERNATIVE B Reroute 1 Bench Emphasis	ALTERNATIVE C Reroute 2 Retaining Wall Emphasis	ALTERNATIVE F Bridge
BOTANICAL SPECIES AND HABITAT				
Vascular plants	No risk to species viability or a trend toward Federal listing	Same as Alt A	Same as Alt A	Same as Alt A
Bryophytes	No risk to species viability or a trend toward Federal listing	Same as Alt A	Same as Alt A	Same as Alt A
Fungi	No risk to species viability or a trend toward Federal listing	May impact species or habitat, very low likelihood of risk to species viability or trend toward Federal listing	Same as Alt B	Same as Alt A
Lichens	No risk to species viability or a trend toward Federal listing	Same as Alt A	Same as Alt A	Same as Alt A
ACCESS AND RECREATION	Non-motorized access only beyond washout on FSR 2610. Maintains non-motorized trail experience in non-wilderness area. Campgrounds remain closed	Access restored to pre-washout conditions. Easier access to ONP for elderly & small children, persons with disabilities, and day visitors. Campgrounds open.	Same as Alt. B.	Same as Alt. B.
Deferred maintenance and start-up costs	park = \$0 Forest = \$0	park = \$17,600 Forest = \$162,000	park = \$17,600 Forest = \$162,000	park = \$17,600 Forest = \$162,000

ISSUE	ALTERNATIVE A No Action	ALTERNATIVE B Reroute 1 Bench Emphasis	ALTERNATIVE C Reroute 2 Retaining Wall Emphasis	ALTERNATIVE F Bridge
WILDERNESS	No effect.	Minor short-term effects to solitude (noise) and unconfined recreation during construction. No long-term effects.	Same as Alt. B.	Same as Alt. B.
SOCIAL/ECONOMIC	Continued reduced income for local service businesses. Present Value of Discounted Costs (PVDC): Forest = \$5,000. park = NA.	Increased income for local service businesses. Dosewallips area again a visitor destination attraction. PVDC: Forest = \$3,116,300. park = \$330,100.	Social same as Alt. B. PVDC: Forest = \$4,329,100. park = \$330,100.	Social same as Alt. B. PVDC: Forest = \$9,095,000. park = \$330,100.
INVASIVE SPECIES	Minimal manual control of existing populations. No control of new infestations.	Newly exposed ground and imported rocks and soil susceptible to invasive plant colonization. Positive results in prevention of invasive plant spread and treatment of current and new infestations	Same as Alt B	Same as Alt B
VISUAL QUALITY	No change, long-term vegetative recovery of high bank	FS Visual Quality Objective (VQO) of retention met	Same as Alt B	FS VQO of partial retention met

ISSUE	ALTERNATIVE A No Action	ALTERNATIVE B Reroute 1 Bench Emphasis	ALTERNATIVE C Reroute 2 Retaining Wall Emphasis	ALTERNATIVE F Bridge
CLIMATE TRENDS AND STREAM FLOWS	No added concerns or costs if stream flows increase	Same as Alt A	Same as Alt A	Bridge would be designed for expected streamflow.
SOUNDSCAPES	No adverse impact	Short-term, moderately adverse impacts to soundscapes. Would be consistent with park management planning efforts.	Same as Alt B	Same as Alt B
PARK OPERATIONS	Continued deterioration of trails and facilities. Increase flight time for air support to trail maintenance and search and rescue operations.	Improved maintenance of trails, reduced time and funding requirements. Improved search and rescue operations.	Same as Alt B	Same as Alt B
WETLANDS AND WATERS OF THE U.S.	No effect	0.019 acre impacted, no net loss	0.020 acre impacted, no net loss	0.016 acre impacted, no net loss Placement of piers in the river and riprap for abutment stabilization could alter river channel in the future.
ESTIMATED IMPLEMENTATION COMPLETE (assumes ROD signed in Summer 2009)	2009	2012	2012	2012
FOREST PLAN AMENDMENTS	None	4 Terrestrial, 1 Aquatic	3 Terrestrial, 1 Aquatic	1 Aquatic

Mitigation Measures and Management Requirements

The proposed action includes mitigation measures and management requirements that have been established in order to minimize adverse effects. These are listed in the DEIS in Chapter 2, with one set common to the reroute alternatives and another set common to the river floodplain alternative.

Measures and requirements include:

- vegetation - emphasizing prevention of the spread of invasive plants;
- watershed - designed to protect water quality;
- fish and wildlife – designed to minimize effects to aquatic and terrestrial species and habitat;
- cultural resources – providing protection for previously unidentified cultural properties.

Monitoring

Implementation monitoring would be conducted as part of all construction activities. Effectiveness monitoring would include observations of construction sites, aquatic sites, wetland sites, and mitigation areas. This monitoring would be done during the first winter after implementation, during periodic road inspections, and while inspecting for invasive species.