Olympic National Park Olympic Hot Springs Road Long-Term Access/Environmental Assessment October/November 2019

National Park Service U.S. Department of the Interior



Olympic National Park, along with the Federal Highway Administration as a cooperating agency, is seeking public review for the Olympic Hot Springs Road (OHSR) Long-term Access Environmental Assessment (EA). The road has experienced multiple washouts since the completion of the dam removal project in 2014. The Elwha Valley is one of the most visited areas within Olympic National Park and the OHSR provides the only vehicular access into the Elwha Valley.

An EA has been prepared and analyzes the impacts of taking no action, raising the road, or realigning a 1-mile portion of the road. The EA also analyzes the effects of rehabilitating the remainder of the 8.2 mile road from the park's boundary to the Boulder Creek Trailhead.

We are asking for your assistance. Please take a moment to read this letter, which provides a summary of the alternatives, and make sure to visit our planning website at http://parkplanning.nps.gov/OHSREA for further information and to provide your comments. We will be accepting comments Monday, November 4, 2019 through December 18, 2019.

Following this review, the interdisciplinary team (IDT) will make any necessary substantive edits to the EA and related documentation that may arise from public comments. The edits may occur within an Errata sheet that would be submitted with the decision document as opposed to being made directly within the EA.

Public Meeting

Wednesday, November 13, 2018 5:30-7:00 p.m. Elwha Klallam Heritage Center 401 East First Street Port Angeles, WA 98362

Project Purpose and Need

Purpose

The purpose of the project is to rehabilitate the 8.2 mile Olympic Hot Springs (Elwha Valley) Road within Olympic National Park and to restore public and administrative road access to visitor and administrative use areas that are currently inaccessible due to washouts on the road. The washouts have resulted from the return of the Elwha River to its natural channel migration following dam removal. The rehabilitated roadway would provide year-round, vehicular access to the Elwha Ranger Station and Glines Canyon Spillway Overlook, and seasonal access to the Whiskey Bend Road and upper Olympic Hot Springs Road.

Public and administrative road access would restore travel to several popular trailheads, the Altair picnic area, a boat launch, Glines Canyon Spillway Overlook, and private lands (Figure 1: Project Area Location Map). The road would be used to maintain trails and other facilities, operate the Elwha Ranger Station, and access the pack stock operations area, seasonal housing, park maintenance area, and Elwha Ranger Station Historic District. Park and cooperating staff also need access to continue work associated with monitoring and furthering the restoration of the Elwha River. The park's 2008 General Management Plan (GMP) and the 2005 Elwha River Ecosystem Restoration Implementation Supplemental Environmental Impact Statement (SEIS) call for continued road access to this area.

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Creating a safe, sustainable, more easily maintained roadway with improved public safety, while minimizing wildlife habitat impacts, is key to the success of this proposal. The proposal would include raising and/or relocating approximately one mile of roadway between the Elwha Boneyard (maintenance staging area) and the Elwha Ranger Station, where severe flooding and flood damage have damaged the existing road. This damage cut off access to important visitor destinations such as the Glines Canyon Spillway Overlook and popular trailheads.

In the rehabilitation sections of road between the entrance and the washouts and between the Ranger Station and the Boulder Creek (Olympic Hot Springs) Trailhead, improvements would maximize environmental sustainability while reducing impacts to park resources, including the Elwha River floodplain and associated rare, threatened, and endangered species habitat. The undamaged sections of roadway would be returned to functional or structural adequacy through resurfacing, subgrade stabilization, retaining wall repair, improving culverts, and other necessary work. These repairs would also reduce the need for unscheduled maintenance.

North of the Elwha Ranger Station, the project would provide continued long-term access while minimizing effects on the floodplain. The overall intent is to cost-effectively restore the roadway to good condition, by avoiding the damaging effects of the Elwha River's channel migration. Under the alternatives, portions of the roadway that remained within the floodplain would continue to be subject to future flood damage; however, flood damage would be less frequent and/or less likely to result in long-term closures.

Need

Sections Subject to Flood Damage: The first three miles of the roadway are adjacent to the Elwha River, and the first two miles are routinely subjected to flooding during high flows. Although the Record of Decision (ROD) for the Elwha restoration environmental impact statement (EIS) called for raising this section by 1-1.5 feet, this did not occur as part of the dam removal project and would not have prevented flood damage if it had. This portion of roadway is typically two lanes and 20-22 feet wide. Currently, near the east channel of the Elwha River (the historical Sanders Creek) the road briefly narrows to a few hundred feet of a single lane (14-feet wide). Although the road is mostly paved, flood damage has removed some pavement.

Because of the 2014 removal of Glines Canyon Dam, the river is expected to continue to migrate within the river valley (channel migration zone) for the foreseeable future. Although downstream movement of sediment formerly trapped behind the dam has stabilized, the river is continuing to adapt to its natural sediment regime. The river is also still recruiting and transporting large wood, resulting in sudden channel movements as log jams form.

With the return of the natural river processes following dam removal, the Elwha River became more dynamic, resulting in the river occupying a former channel that matches the road alignment near the Elwha Campground. This resulted in extensive damage to a portion of the road between the boneyard and the ranger station during storm events since the removal of Glines Canyon Dam (2014).

In 2015, two temporary bridges were installed over the newly occupied east channel, first a twenty-foot I-beam bridge and later a temporary modular Mabey Bridge. Flooding also resulted in catastrophic damage to the Elwha and Altair campgrounds, which were subsequently closed. Flooding in 2017 required the installation of two more temporary bridges over new washouts south of the Mabey Bridge. The severity and frequency of flood damage to the road made it necessary to restrict access to only administrative use in the summer 2018, preventing public road access to the Glines Canyon Spillway Overlook and other public use areas in the Elwha Valley on the Olympic Hot Springs and Whiskey Bend roads.

Although the roadway was temporarily passable for administrative use with the installation of three one-lane bridges, the bridges were removed in autumn 2018 to prevent their loss due to high flood flows during the following winter.

Within the first three miles from the entrance, there are several locations where the road is showing signs of distress and aging. These signs include alligator cracking, separation/loss of the most recent pavement preservation treatment, and isolated areas where the road has sunk and was repaired. During large flow events, minor flooding overtops the segment of road that runs through Sweets Field just south of Madison Falls. Future flooding during extreme flow events may allow the Elwha River to move across its floodplain and erode a new channel in this area, across the road and through Sweets Field. The potential for this channel migration is lower than for washouts near Sanders Creek because this area is farther from the Elwha River and has a flatter slope.

On the east side of the road south of the Elwha Ranger Station, there are several hundred linear feet of wetland. Some appear to have been created by the construction of the roadway, while others are associated with a wetland complex that extends to the east. Several poorly functioning culverts may be partly responsible for some of the wetlands. The roadway in this segment is in poor condition and shows signs of fatigue and subsurface failure. Surrounding ditches have standing water that appears to be infiltrating the pavement structure.

Upper Olympic Hot Springs Road: On this section of the road, the pavement surface is deteriorated and has reached the practical end of its service life.

This section (the six miles from Soldiers (Altair) Bridge to the Boulder Creek [Olympic Hot Springs] Trailhead), ascends 1,800 feet from the canyon floor to the trailhead. This upper segment is narrow (approximately 16-18 feet) with benched road construction characterized by steep cuts and fills. It includes numerous areas of road settlement and shoulder failures. Most of the road is asphalt, but there are multiple segments from 50 to several hundred feet in length where the asphalt has been removed and the road is maintained with an aggregate surface. Numerous sections of the roadway have subsurface stability issues, where the road surface is lower than adjacent areas. In several locations, the road is failing where log crib walls have exceeded their design life and are no longer functioning effectively.

Field reconnaissance yielded 45 sites displaying instability within the upper five miles of roadway. The Federal Highway Administration (FHWA) Western Federal Lands Division (WFLD) categorized each site for hazard severity/risk. A few sites are associated with active landslides which, if repaired, would require large-scale retaining structures to reduce chronic movement. Risks from these slides would likely occur during the offseason when the road is closed by snow accumulation. Therefore, proposed repairs would stabilize but not reconstruct these areas. The other areas of instability are generally related to settlement of fill beneath the downhill lane.

Decision to be Made

This EA evaluates impacts of the proposed project on park resources. It will guide the Regional Director, National Park Service (NPS), Interior Regions 8, 9, 10, 12, to make a decision, based on a recommendation by the Superintendent of Olympic National Park, about whether and how to rehabilitate the Olympic Hot Springs Road. The Regional Director's decision will be documented in a Finding of No Significant Impact (FONSI) for this EA. If the EA reveals significant impacts on park resources from the project, an Environmental Impact Statement and Record of Decision would be prepared.

Alternatives

The IDT, which includes NPS staff and subject-matter-experts (SMEs) and Western Federal Lands – Federal Highways Division (FHWA) staff and engineers, have conducted pre-NEPA planning. In addition to the no action alternative, the IDT has identified two action alternatives.

The alternatives are as follows:

Alternative 1: No Action (Continue current management direction)

Management of Roadway: Existing management of the Olympic Hot Springs Road would continue. Public access beyond the gate at Madison Falls would be unavailable, due to the lack of parking and turnaround locations past the gate. (Other areas suitable for parking are within the Elwha River channel migration zone.) The section of roadway between the entrance and the Elwha Boneyard would continue to be maintained to accommodate administrative use. The section of road between the boneyard and the Mabey Bridge abutments would not be maintained. No vehicular traffic past the boneyard turnoff would be possible. Administrative vehicle access would continue to be available to the Elwha Boneyard beyond Sweets Field.

In the short-term, the NPS would remove a portion of the road where it is adversely affecting the ability of the Elwha River to migrate within its lower floodplain. The NPS would also manage the area to allow for nonmotorized public access, which would continue to be limited to the non-motorized hiking/equestrian trail that bypasses the washed out roadway. The trail would provide access to the upper Elwha Valley for hikers, bicyclists walking their bikes, and equestrians. Over time, the trail would be maintained as needed to accommodate these user groups but would not be substantially modified to become a formal multiuse trail.

In the long-term the NPS would develop a plan to address withdrawal from the upper Olympic Hot Springs and Whiskey Bend roads and to remove other non-historic facilities from the area. Historic facilities would also be addressed in this future plan.

Upper Roadway (above Glines Canyon Overlook): Areas of road settlement and shoulder failures along the upper road would not be repaired. Stability issues beneath the variable aggregate and paved sections would continue. Failing log crib walls would further deteriorate.

Lower Roadway (below Glines Canyon Spillway Overlook): On the lower road, increased severity and frequency of flooding would likely continue. The road and ditches would not be maintained and failures would be minimally repaired to maintain access. The removal of the Glines Canyon Dam resulted in the Elwha River creating new channels, some of which continue to affect the roadway. For instance, the Elwha River is currently flowing along the east bank obscuring one of its tributary channels (Sanders Creek).

Whiskey Bend Road: Depending on the plans for withdrawal from the area, lack of maintenance on this road would also cause the road to begin to deteriorate.

<u>Park Facilities</u>: The vault toilet at the Madison Falls parking area would continue to be available. The vault toilets at the Glines Canyon Spillway Overlook, ranger station and the Boulder Creek (Olympic Hot Springs) and Whiskey Bend trailheads would continue to be locked and unavailable. Other facilities, such as the ranger station, would remain closed.

<u>Public Access</u>: The park would maintain trail access from the entrance, through the boneyard to Olympic Hot Springs Road beyond the washouts. As described above, the bypass trail (about one mile) would continue to be open to foot and equestrian use and bicycles could be walked or hand carried. From the entrance it is 8.2 miles to the Boulder Creek Trailhead via the road. The parking area at the end of Whiskey Bend Road is 4.5 miles from its intersection with the Olympic Hot Springs Road, or 6.5 miles from the entrance.

Road and trail closures are likely during and after floods. Depending on their extent, closures could last for days, weeks, or months. Although the West Elwha Trail provides access to Altair Picnic Area (3.2 miles), the trailhead has very little parking and accesses the park through private land via an easement. Based on current conditions, there is neither space nor private landowner interest in expanding public parking.

Private Property Access: Approximately 0.25 miles north of the ranger station is a gate providing access to 15 parcels with approximately 11 different owners. The NPS is legally required to provide access to private property owners although access does not have to be motorized. Under alternative 1 property owners could use the existing road/bypass trail to reach their lands.

Elements Common to the Action Alternatives (2 and 3)

The following actions are common to both action alternatives (2 and 3):

Madison Falls Emergency Bank Stabilization: Previous emergency work implemented at the park entrance is included. Winter storms eroded 200 feet of the Elwha River riverbank adjacent to the road. In an emergency repair, the park placed approximately 700 cubic yards of riprap along the east bank of the Elwha River along the eroded riverbank below the ordinary high water mark (OHWM) close to the park entrance sign. Winter storms caused the loss of several trees in late November 2018. The riverbank at this location was 2-10 feet (horizontally) from the edge of the road. The project required temporary road closure, including approximately 200 feet of the county road outside the park entrance. It also required monitoring by fisheries and cultural resources staff, and emergency consultation with the USFWS, NMFS, ACOE, State Historic Preservation Officer (SHPO) and the LEKT prior to taking action.

Between the park entrance and the northernmost washout, additional bank stabilization repairs would also occur where the Elwha River has made incursions into the bank close to the road. This area is near the Madison Falls parking area. Repairs would largely consist of placing additional woody debris and rock to protect and stabilize the bank.

Parking Area and Infrastructure Improvements

The following actions are included in the road rehabilitation:

Madison Falls Parking Area: This area would be modified by formalizing parking stalls and improving delineation of the parking lot within the existing disturbed areas to improve parking, including some additional paving. Parking at Madison Falls may also be expanded later. Minor upgrades planned for the Madison Falls parking area include picnic table accessibility.

Glines Canyon Spillway Overlook Parking: The Glines Canyon Spillway Overlook parking area would be modified to add a "hammerhead" turnaround for safer traffic flows.

Boulder Creek (Olympic Hot Springs) Trailhead: The parking area at the end of Olympic Hot Springs Road would be modified to maximize capacity within the existing footprint, including paving. This would reduce the need for visitor parking on road shoulders.

Soldiers Bridge: Minor preventative maintenance, such as bridge rail work and deck sealing would be included.

Powerlines: Powerlines along Olympic Hot Springs Road would be relocated to follow the new alignment (reroute or grade raise). For the grade raise, they would be hung on the bridge and then would continue underground to the corrals, while for the reroute they would be placed underground within the road shoulder. Remaining powerlines would be buried in the road shoulder within the road prism from the reroute/grade raise south to the Ranger Station and to the Whiskey Bend junction.

Sign Replacement/Installation: All regulatory signs needing replacement would be reinstalled as part of the project. In addition, park information signs on the roadway would also be replaced. And, there would be a new entrance sign at Madison Falls. An estimated 25 regulatory and 30 informational signs line the roadway.

Road Rehabilitation: To improve the overall roadway condition, there are two project components proposed under this EA: 1) road rehabilitation, and 2) rerouting or reconstruction of the one-mile section of roadway subjected to the flooding washouts (see alternatives 2 and 3 description). The proposed road rehabilitation portion of the project is common to alternatives 2 and 3 and is a mix of rehabilitation, reconstruction, restoration, and resurfacing. It includes resurfacing and other work necessary to return the roadway; including the road shoulder, culverts, bridges, and other parts to a condition of functional and/or structural adequacy. The proposed rehabilitation would occur over 7.2 miles of the Olympic Hot Springs Road, a two lane asphalt concrete roadway, with some gravel sections. Rehabilitation would include repair of the road base and subgrade where necessary.

The rehabilitation portion of the project would also include:

- Minor alignment shifts within the existing prism;
- Some subsurface repairs within the roadway (below the existing driving surface);
- Repair/replacement of existing walls;
- Culvert repair or replacement including adding fish passable pipes where needed;
- Ditch cleaning;
- Slope stabilization/erosion protection;
- Guardrail replacement;
- Limited tree removal (as needed to repair the roadway);
- New asphalt pavement surfacing or aggregate surfacing; and striping

Road rehabilitation would involve work in three distinct sections: from the park boundary to the northernmost washout at the east channel (section 1); from the Elwha Ranger Station to the Glines Canyon Spillway Overlook (section 2); from the Glines Canyon Spillway Overlook to the Boulder Creek (Olympic Hot Springs) Trailhead (section 3).

Section 1 and Section 2: Approximately 2.2 miles in length, these sections would be rehabilitated with subgrade stabilization, ditch cleaning, new culverts where needed, new pavement, and minor roadway shifts to provide better separation between the river and roadway. Minor road profile changes would better accommodate high river flows in the lowland areas (i.e. near Sweets Field and a short segment of road just south of the Whiskey Bend Road turnoff that traverses a wetland). To address the flooding and possible Elwha River migration across the road through Sweets Field, the road grade through this segment would be raised slightly and reconstructed with a hardened subgrade. This section of grade raise would not eliminate, but would reduce the potential for and frequency of flooding over the roadway. The hardened subgrade would reduce the likelihood that a future full washout of the roadway in this area would occur during larger floods. It would also prevent a new side channel of the Elwha River from forming across the road through Sweets Field.

Road width would be consistent, with most work falling within previously disturbed clearing limits; however, some vegetation removal would be necessary. Minor repairs would be made to existing walls and new walls would also be constructed to help stabilize the existing roadway.

Section 3: This approximately 5-mile-long section would be repaved, with new culverts and subsurface repairs as needed. The roadway profile and horizontal alignment would be the same. Work in this segment would fall entirely within the road prism (previously disturbed limits) and would include limited disturbance outside of the current road prism. Of the three segments, this portion has the lowest use and the roadway is in the poorest condition. Several locations require either wall repair or a new wall. Other locations with slope stability issues would not be included in the proposed project due to their low cost-benefit and limited immediate risk.

Preliminary plans show a range of culvert sizes (24-, 36-, and 60-inch), including approximately 40 culverts that would be cleaned in place. About five drainage structures would be repaired and there would be approximately 43,400 linear feet of ditch reconditioning (cleaning and reshaping). Approximately 250 linear feet of guardrail

would be removed and 3,750 linear feet installed in six different locations. Approximately three rockery walls would be constructed, with lengths of approximately 100 feet between Deep Creek and Deadman's Gulch and 200 feet (at an unnamed location between stations 470 +80 and 472 +85).

Private Property Access: Private property access via road would be maintained, although this would require keeping a section of the existing roadway in the floodplain.

Mabey Bridge Abutments: The abutments associated with the Mabey Bridge would be removed and the area restored. However, prior to that, during construction of the reroute or grade raise, the park would temporarily replace the Mabey Bridge. The bridge would be used for access to the project area and to remove the pre-cast well house building via a crane. It could also be used to salvage the kitchen shelter, if it's safe and practical, and pending the completion of SHPO consultation. The bridge would also be used to access the existing roadway to remove pavement, recontour the existing grade, and to plant/reseed.

Restoration: Restoration actions would include removing the Elwha Campground pump house, and the Mabey Bridge abutments.

Wetlands Mitigation: Wetland mitigation for unavoidable impacts associated with road fill, ditch reconditioning and culvert repairs/replacements is required under the ACOE permitting process. Section 404 of the Clean Water Act and NPS policy require that construction that adversely impacts wetlands must be compensated by restoring, creating, or enhancing other wetlands at a 1:1 ratio. The mitigation wetlands must also replace the functions and values of the impacted wetlands. Accordingly NPS and FHWA propose to restore and/or enhance low functioning wetlands within and adjacent to the project area, the size of which would be determined during the Section 404 permitting process. The mitigation will be considered successful when hydrology and vegetation meet criteria specified in the 1987 ACOE Delineation Manual by the end of the monitoring period set during permitting (likely 3-5 years).

Alternative 2: Realignment (the Preferred Alternative)

This alternative calls for obliterating one mile of the lower Olympic Hot Springs Road through the floodplain, constructing a reroute (realignment) above the floodplain, and rehabilitating other parts of the existing road.

Actions would be the same as described in ECAA. In addition, a one-mile portion of the road would be realigned. The realignment would reconnect with the existing rehabilitated road north of the Elwha Ranger Station and south of the private property, so vehicles would need to turn north on a section of remaining roadway to access the private property. This reconstruction portion of the project is intended to improve the roadway so that flooding and flood damage would be less frequent and would not be expected to damage the realigned road.

Geotechnical Analysis Phase II: Additional geotechnical drilling is necessary to confirm the initial findings of geotechnical drilling. This could include helicopter-assisted drilling off the proposed roadway to clarify slope stability issues and to inform actions needed to improve slope stability. Additional investigation is also needed to design the footings for any structural elements such as walls or large culverts.

Realignment: The road would be rerouted upslope from the east channel crossing on the north end to near the Elwha Ranger Station on the south end (a distance of approximately one mile). Although the road would be located higher on the slope it would continue to be outside of wilderness. To stabilize the road on the slope above the Elwha River floodplain, road construction would affect the east channel (currently occupied by a portion of the Elwha River).

Following construction of the realignment, the existing one mile portion of the roadway within the floodplain would be removed and restored. Depending on recommendations, there would be grading to remove the dikelike effects of the road subgrade, asphalt and concrete curb removal. Native riparian vegetation would also be added. Relocation of the road, and removal of the existing road, would remove most human impediments to the recovery of federally-listed fish, including Chinook salmon, steelhead, and bull trout in the area and improve essential fish habitat for pink, chum and coho salmon, continuing to implement the Elwha restoration EIS.

With a paved width of 20-22 feet and 1-2 foot unpaved shoulders, the realignment would be similar in character to the adjacent roadway. Cut and fill walls would be built where necessary to stabilize the road on the hillside. The road would have new culverts, short bridges, and drainage features that allow for tributary crossings, and it would be striped for two-way traffic.

Overall, earthwork would comprise approximately 50,000 cubic yards. Cuts and fills would be balanced to the extent practical, and would affect much of the realignment area because it is located on a slope. Where possible, the realignment would follow the route that was used for geotechnical drilling. After construction, disturbed areas would be revegetated with native plants and seeds. Over time, the roadway would have characteristics similar to other parts of the Olympic Hot Springs and Whiskey Bend roads.

Walls would be used where appropriate to minimize impacts on natural and cultural resources, whereas cut and fill would be used to minimize costs. Additional design features and mitigation would include channel roughening elements such as rock, root wads, and logs that would improve fish habitat and protect the roadway embankment. This would create a bank with uneven edges and channel complexity and the slower velocity would provide more opportunities for spawning locations to develop.

The realignment would require removal of approximately 42-52 Douglas-fir, bigleaf maple, western hemlock, and western red cedar trees measuring more than 12 inches at 4.5 feet above the ground. Up to 10 walls, mostly toward the north end of the project, would be built, totaling to 1,000 linear feet and 12,000 square feet. These would be either rockery type (cut walls) or mechanically stabilized earth (MSE) walls. At the north end of the project area, approximately 8,500 cubic yards of riprap, root wads and large logs would be placed to stabilize the slope beneath the road.

Overall the upslope alignment would place the road in a location where cross drainages are in defined channels; and surface soils are granular rather than fine-grained, thereby resulting in a reduced risk of road failure due to perched groundwater close to the surface. This alignment would have more wetland but fewer floodplain impacts than alternative 3. Developing the final design would include more opportunity to "thread" the road to avoid some very large trees.

Private Property Access: Access to private land would require a U-turn from the reroute because the access road is approximately 1,200 feet north of where the new reroute would end. This remaining portion of the former Olympic Hot Springs Road would be maintained as an unpaved road. A new gate would be installed at the junction of the private access road.

Restoration: In addition to ECAA restoration actions, asphalt from the former roadbed would be removed and the area re-contoured from the new east channel crossing to the private property access road. The decommissioned roadway sections would also be revegetated. A logiam or other structural deflection would be installed to allow the former roadbed to be restored by deterring water from flowing down it.

Alternative 3: Grade Raise

This alternative calls for improving the lower Olympic Hot Springs Road through the floodplain, and rehabilitating other parts of the existing road.

This alternative would be the same as alternative 2 between the park boundary on the north to the boneyard, and then again from the Elwha Ranger Station and beyond. The bridge to elevate the road above a portion of the

floodplain would begin after the boneyard. As in alternative 2, the bridge and grade raise would reconnect with the existing road north of the Elwha Ranger Station. With the grade raise/bridge, flood damage would be less frequent and/or less likely to damage the new section of road.

Grade Raise: The existing alignment of the road would be maintained and the grade raised an average of 15 feet through the one-mile section subject to frequent flooding between the east channel crossing and the Elwha Ranger Station. To elevate a portion of the road outside of the Elwha River channel, a concrete span bridge (approximately 1,400 feet long) would be constructed between stations 75+65 and 89+55 to span the Elwha River and adjacent floodplain near the east channel. The bridge would have approximately eight piers that would be protected at their base using a combination of riprap and large woody debris (LWD). The road would also include guardrail, placed at the edge of the pavement shoulder on both sides of the bridge as well as at the wall locations. Trees and other vegetation would be removed to create the steeper roadside embankment on either end of the bridge. Other roadway sections susceptible to repeated flooding would also be reinforced to withstand periodic inundation. In addition to the walls on either side of the bridge, there would be two new walls, one of approximately 130 linear feet at station 94+15, and one of 800 linear feet at station 97+29. The completed road would be about 22 feet wide, with paved shoulders.

Remaining pavement within the floodplain would be removed and the area restored. Much of the restoration, however, would be beneath the new bridge and fill would be placed in the floodplain, including the piers and the materials used to support them.

Private Property Access: The intersection for the junction of the private access road would be very similar to existing conditions. Depending on need, the transition from the new (higher elevation) road to the existing private road may be tapered downward toward the river to maintain an appropriate approach grade. A new gate would be installed at the junction with the private access road.

Restoration: In addition to ECAA restoration, removing asphalt and re-contouring the former roadbed from the north end of the new bridge to the private property access road; and revegetating the decommissioned roadway underneath the grade raise would occur.

Alternatives and Actions Considered but Dismissed

- Variations of the Grade Raise and Realignment Alternatives
- Raise the Road 1-2.5 feet as Called for in the Elwha River Ecosystem and Fisheries Restoration Plan (Elwha) EIS (FEIS 1996, SEIS 2005)
- Construct a Flood-Proof Roadway by Raising the Grade and Fortifying the Road Base
- Prevent the River from Overtopping the Roadway by Controlling the River Channel
- Construct the Roadway Further Away (Upslope) from the Elwha River/Begin the Reroute Near the Elwha Boneyard (Maintenance Staging Area)
- Construct a Single-Lane Reroute with Curve-widening or Turnouts
- Construct an Aerial Tram to Take Visitors to the Boulder Creek (Olympic Hot Springs) Trailhead and/or to the Top of Whiskey Bend Road
- Construct a New Road Entrance from the West Side of the Elwha River

Initially, for the one-mile stretch of roadway near Sanders Creek, four realignment options were developed and compared. Two alignments would be east of the existing OHSR and two alignments would follow the existing roadway at different profiles. The alignments would minimize the impact within the channel migration zone and restore a portion of the area currently affected by the roadway to a natural state. These realignments underwent preliminary evaluation based on how well they would perform against the following criteria:

- Footprint area
- Geometry

- Visual impact
- Geotechnical risk
- Future landslide risk
- Is the realignment within the active river migration zone?
- Conceptual cost comparison

Another realignment option was developed and evaluated at the floodplain area near the Madison Creek entrance station.

Actions Outside the Scope of This EA

The following actions could be considered after the disposition of the roadway has been determined and implemented:

- Remove or Relocate Park Facilities Subject to Flooding and/or Protect Entrance Station, Ranger Station and Other Park Assets from Flooding
- Relocate Closed Campgrounds
- Systematically Retreat from the Area Now Occupied by the Olympic Hot Springs and Whiskey Bend Road

Tentative Schedule

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Action	Timeframe
Tribal Consultation	Nov 2018-ongoing
SHPO Consultation	Dec 2018-ongoing
Civic Engagement (30 days)	Dec 2018-Mar 2019
NPS Pacific West Region Project Review Presentation	Sept 2019
Develop Advisory Board (DAB) Schematic Design Submittal	Sept 2019
NEPA Document Preparation (including the preferred alternative)	Dec 2018-Oct 2019
Floodplains Statement of Finding	July-Oct 2019
Wetlands Statement of Finding	July-Oct 2019
Biological Assessment Preparation	July-Oct 2019
Park/FHWA Review	Oct 2019
NPS Pacific West Regional Review	Oct 2019
Public Review of Draft EA (45 days)	Oct-Nov 2019
Biological Opinion (by USFWS and NMFS)	Mar 2020
Decision Document	Apr 2020

How to Comment

- Comment online at: https://parkplanning.nps.gov/OHSREA (preferred method)
- Submit written comments at the public meeting (hardcopy forms will be provided).
- Deliver or mail comments to:

Superintendent Sarah Creachbaum Olympic National Park 600 East Park Avenue Port Angeles, WA 98362-6798

Comments will not be accepted by phone or email. Comments submitted by individuals or organizations on behalf of other individuals or organizations will not be accepted. You should be aware that your entire comment—including personal identifying information such as your address, phone number, and e-mail address—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

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