

Table 34: Impact Comparison Chart

Impact Topic*	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Air Quality	Short-term negligible to minor adverse effects, long-term beneficial effects	Short-term minor adverse effects, long-term beneficial effects	Short-term minor and long-term moderate adverse effects, long-term beneficial effects	Short-term minor to moderate adverse effects, long-term beneficial effects	Negligible to minor adverse effects, long-term beneficial effects
Impacts would continue to occur from access to the area (Alternatives 1-5), and from both construction (Alternatives 2-4) and use of the area (Alternatives 3 and 4). There would be long-term beneficial effects from restoration in Alternatives 1, 2 and 5, and long-term beneficial effects in all alternatives from an overall reduction of vehicles on the roadway. Compared to existing conditions, these impacts would remain localized and would not be detectable over ambient conditions except in the vicinity of the roadway.					
Geology / Soils	Short- and long-term negligible to minor adverse effects, long-term beneficial effects	Short-term negligible to moderate adverse effects, long-term minor adverse effects, localized long-term beneficial effects	Same as Alternative 2 with more short-term moderate adverse effects and fewer beneficial effects	Same as Alternative 3	Same as Alternative 2
Short-term moderate and long-term minor adverse effects would be associated with construction of new facilities. Moderate adverse effects would be greatest in Alternatives 3 and 4 from the construction of erosion protection measures and reestablishment of the road and fewest in Alternatives 1 and 5. Beneficial effects would be greatest in Alternatives 5, 2 and 1, with fewer beneficial effects in Alternatives 3 and 4 from less overall restoration.					
Water Resources Hydrology	Short- and long-term negligible to minor with the potential for adverse effects, long-term beneficial effects	Same as Alternative 1 with additional short- and long-term minor to moderate adverse effects and additional beneficial effects	Same as Alternative 1 with additional short- and long-term minor to moderate adverse effects	Same as Alternative 3, with more moderate adverse and more beneficial effects	Same as Alternative 1, then long-term negligible to minor adverse effects, long-term beneficial effects
Water Resources Water Quality	Long-term negligible to minor adverse effects, short-term minor to moderate adverse effects, long-term beneficial effects	Long-term minor and short-term negligible to moderate adverse effects, long-term beneficial effects	Long-term minor to moderate adverse and short-term negligible to moderate adverse effects (more than Alternative 2), long-term beneficial effects	Same as Alternative 3, with more short-term moderate adverse effects and potentially more long-term beneficial effects	Short-term negligible to minor and long-term negligible adverse effects
Water Resources Floodplains	Short- and long-term minor to moderate adverse effects, long-term beneficial effects	Short-term minor to moderate and long-term moderate to major adverse effects, long-term beneficial effects	Short-term moderate and long-term major adverse effects, long-term beneficial effects	Same as Alternative 3 with fewer beneficial effects	Same as Alternative 1 with more long-term beneficial effects from discontinuing maintenance of the informal trail.
Water Resources Wetlands	Short- and long-term minor adverse effects on 0.5 acres plus minor long-term effects from informal trail. Long-term beneficial impacts on 0.5 acres.	Short- and long-term minor adverse effects on 0.5 acres plus minor long-term adverse effects on an additional 1.3 acres. Long-term beneficial effects on 1.8 acres.	Short-term minor and long-term moderate adverse effects on 1.24 acres, plus minor to moderate adverse effects on additional 1.31 acres, long-term beneficial effects	Short-term minor and long-term moderate adverse effects on 1.32 acres, plus minor to moderate adverse effects on additional 1.64 acres, long-term beneficial effects.	Short- and long-term minor adverse and beneficial effects on 0.5 acres plus short-term minor adverse effects from constructing new drainage crossings
Vegetation	Long-term minor to moderate adverse effects, long-term beneficial effects	Long-term negligible to moderate adverse effects, localized beneficial effects	Similar to Alternative 2 with both more adverse and beneficial effects	Similar to Alternative 3, with fewer beneficial effects	Similar to Alternative 2, with more adverse effects
Beneficial effects would be greatest in Alternative 5, from greater area restoration of the road in the river corridor, followed by Alternatives 1, 2, 3 and 4, while adverse effects would also be greatest in Alternative 5 (from more physical modification of undisturbed vegetated landscape), followed by Alternatives 4, 3, 2 and 1.					

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Wildlife	Short-term negligible to minor and long-term minor to moderate adverse effects, some long-term beneficial effects	Short-term minor to moderate, long-term minor to moderate adverse effects, some long-term beneficial effects	Short- and long-term moderate adverse effects, with fewer beneficial effects	Similar to Alternative 3, with more beneficial effects	Short- and long-term minor to moderate adverse effects, long-term beneficial effects
Special Status Species (federally listed)	<p>No effect: gray wolf, grizzly bear, lynx, fisher</p> <p>May affect, likely to adversely affect:</p> <ul style="list-style-type: none"> • northern spotted owl • marbled murrelet • bull trout • bull trout critical habitat • steelhead, and • essential fish habitat for Chinook and coho salmon <p>Although the effect determinations are the same, overall, there would be fewer adverse impacts in Alternatives 1, 2 and 5, compared to Alternatives 3 and 4.</p>				
Ethnography	No change, some beneficial effects (no effect)	Long-term minor adverse, and long-term beneficial effects (no adverse effect)	Same as Alternative 2	Same as Alternative 2 with fewer beneficial effects from shuttle	Same as Alternative 2
Beneficial effects could occur from expanded parking. Alternatives 2-5 would have long-term minor beneficial impacts on ethnographic resources from improvement of fish habitat, and improvement of parking and access. Potential long-term minor adverse impacts would occur from expansion of parking outside the current Carbon River Entrance. Shuttle access under Alternative 4 could diminish some of this effect. Overall, the alternatives do not propose use where no use is currently occurring and compared to existing conditions, there would be minor changes that could affect Native American use of the area. There would be no adverse effect to known ethnographic resources.					
Prehistoric and Historic Archeological Resources	No adverse effect on Washington Mining and Milling Company Adit, potential adverse effect on can dump	Same as Alternative 1 plus: Potential adverse effect on Ipsut Creek Campground	No adverse effect on Washington Mining and Milling Company Adit and can dump, potential adverse effect on Ipsut Creek Campground	Same as Alternative 3	Same as Alternative 2
Other potential impacts to archaeological resources would be avoided by additional survey and analysis. This could include realignment of the proposed trail in Alternative 5 to avoid archeological resources.					
Historic Structures / Cultural Landscapes	Adverse effect on Mount Rainier National Historic Landmark District (NHLD) requiring a Memorandum of Agreement (MOA) with the State Historic Preservation Office (SHPO) and Advisory Council for Historic Preservation (ACHP).	Same as Alternative 1.	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
The adverse effect would be as a result of the decision to not maintain the Carbon River Road to the Secretary of the Interior's Standards for the Treatment of Historic Properties and from incompatible alterations to this portion of the NHLD. The alternatives would change the characteristics of the Carbon River Road that make it eligible for inclusion on the National Register of Historic Places as part of the NHLD. Not maintaining the road would continue to result in the loss of landscape characteristics (natural systems and features, spatial organization, land use, circulation, topography, vegetation, buildings and structures, and archeological sites) and the integrity associated with them (design, materials, workmanship, feeling and association of the road).					
Visitor Experience Access and	Long-term minor to major adverse effects, long-term	Short-term minor adverse effects, long-term minor to	Short-term minor to moderate adverse effects,	Similar to Alternatives 2 and 3, with short-term minor to	

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Transportation	beneficial effects	major adverse effects, long-term beneficial effects	long-term minor to moderate adverse and beneficial effects	moderate adverse, effects long-term minor to major adverse and beneficial effects	
Visitor Experience Opportunities	Long-term minor to major adverse effects	Long-term moderate to major adverse effects, long-term beneficial effects	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Visitor Experience Information and Education	Long-term beneficial effects	Similar to Alternative 1 with more interpretation	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Visitor Experience Safety	Long-term minor to moderate adverse effects	Long-term minor adverse and long-term beneficial effects	Same as Alternative 2	Similar to Alternative 2 with additional improvements	Long-term negligible to minor adverse effects, long-term beneficial effects
Wilderness	Short-term minor to moderate adverse effects	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1 plus long-term minor to moderate adverse effects.
Wild and Scenic Rivers	Actions in Alternatives 1-5 would affect some values called out in the eligibility report, however there would be no effect on the eligibility of the Carbon River for designation as part of the wild and scenic rivers system.				
Park Operations	Short- and long-term minor to moderate adverse effects	Same as Alternative 1	Short- and long-term moderate adverse effects	Same as Alternative 3	Short-term moderate and long-term minor adverse effects
Socioeconomics	Long-term minor adverse, and short- and long-term beneficial effects	Same as Alternative 1	Similar to Alternatives 1 and 2, with more beneficial effects	Same as Alternative 3	Long-term minor adverse and long-term beneficial effects.

*There would be no impairment of any resource associated with the implementation of Alternatives 1-5.