

## Carbon River Road Management Considerations

### **General Management Plan (GMP) Direction for the Carbon River Area**

The GMP Record of Decision states that the park would “close the Carbon River Road to private vehicles when there is a major washout of the road and convert the Ipsut Creek Campground to a walk-in / bike-in camping area.”

The GMP envisioned that there would be no adverse effect on the contribution of the Carbon River Road to the Mount Rainier NHLD from this action because the “Carbon River Road eventually would be converted to a multi-use, non-motorized trail.”

“The existing historic road corridor would be maintained in a manner consistent with the NHLD designation.”

Implications: Although the GMP (NPS 2002) for Mount Rainier National Park calls for the eventual closure of the Carbon River Road, as a programmatic document the GMP did not establish guidelines for the closure. The Mount Rainier General Management Plan (GMP) was the decision document that determined Mount Rainier would no longer maintain the Carbon River road after the next major washout. An environmental impact statement was prepared for the GMP and the record of decision was signed in 2002.

The park is now preparing an Environmental Assessment (EA) to determine how to implement the direction provided by the GMP. The park is not considering reopening the decision of the GMP; rather, the EA tiers off the GMP and will answer questions and provide direction not found in the GMP about how to implement the closure of the Carbon River Road.

Reopening the road in its entirety is not currently under consideration. Although the GMP did not define what a major washout is, the decision to eventually close the road was based on a number of factors that included: 1) a long history of flood damage since the Carbon River Road was built; 2) a rising riverbed elevation (aggradation) that in many cases is equal to or higher than the Carbon River Road; 3) an increase in the frequency and intensity of flood events; and 4) the extent of road damage caused by floods in 1990 (third largest event recorded) and 1996 (second largest event recorded). The 2006 flood was the largest flood event recorded since 1930 at the Fairfax gauging station downstream of the Carbon River Entrance.

### **Wilderness**

The Carbon River Road is bordered on its south side by designated Wilderness that begins just 100 feet from the centerline of the road. Just before Green Lake, that wilderness designation encompasses the area on both sides of the road.

Implications: The wilderness boundary precludes rerouting the road. Rerouting the trail more than 100 feet from the centerline of the road would mean that the trail would be located in wilderness (and would preclude bicycle use). Impacts to wilderness from noise and activity associated with the proposed alternatives would also need to be considered.

## **National Register of Historic Places**

The Mount Rainier National Historic Landmark District is listed on the National Register of Historic Places and is significant because Mount Rainier's master plan was the first for a national park and the first and only one to be completely implemented and it influenced all other national park master plans. The period of significance for the district is from 1906 -1957 and it includes much of the built infrastructure of the park, including roads and bridges, developed areas, trails, and other structures.

The Carbon River Road is listed on the National Register of Historic Places as contributing to the Mount Rainier NHLD because it was constructed during the period of significance for the NHLD under the direction of Stephen Mather, the first director of the NPS and because it was incorporated into the park's first master plan. It was built as a scenic drive between 1921 and 1925. The first floods to affect the road occurred during road construction. By the time Civilian Conservation Crews were in the park, they spent 8 years (1933-1941) at Ipsut Creek repairing flood damage to the road (among other projects). When the Bureau of Public Roads (precursor to the Federal Highway Administration) took over management of NPS roads its engineers noted "The road will be flood-prone in perpetuity, due to its location in the Carbon River floodplain."

Implications: Actions that would affect the contribution of the Carbon River Road to the Mount Rainier National Historic Landmark District would be evaluated under Section 106 of the National Historic Preservation Act which includes consultation with the Washington State Historic Preservation Officer. An *adverse effect* would require a MOU to be negotiated between the park and the State Historic Preservation Officer.

## **Threatened Species (Endangered Species Act)**

Bull Trout: Based on research, the bull trout found in the Carbon River are a unique subpopulation. Although bull trout are found in the Carbon River year-round, the most sensitive time for them is during spawning site selection, egg laying and egg incubating.

Implications: In consultation with the USFWS, the park would need to minimize or avoid actions that would occur in or affect water during the sensitive period for bull trout.

Northern Spotted Owl: No known owl territories overlap the western portion of the Carbon River Road. However, there are occupied territories adjacent to the middle-eastern sections of the road and Wonderland Trail. Nonetheless, the park comprises half of the Rainier Northern Spotted Owl Demographic Study Area and population rates of growth 1998 – 2003 have shown an annual decline of 10%. The northern spotted owl nesting season is broken into early and late periods and occurs from mid-March to late September.

Implications: In consultation with the USFWS, the park would need to minimize or avoid actions that would potentially affect northern spotted owls (noise and activity or habitat modifications) during the nesting season.

Marbled Murrelet: Based on radar detection surveys, it is likely that many marbled murrelets nest in the old growth forest along the Carbon River Road. Work conducted outside the nesting

season (before April or after mid-September) would minimize effects to the greatest degree possible.

Implications: In consultation with the USFWS, the park would need to minimize or avoid actions that would potentially affect marbled murrelets (noise and activity or habitat modifications) during the nesting season.

### **Old Growth Forest**

The forests on the south side of the Carbon River are among the oldest in the park (501-600 years old). This western hemlock / devil's club forest community comprises approximately two percent of the forested habitat in the park. The Carbon River Valley is the only place in the park where Sitka spruce are found. This forest habitat is characteristic of a temperate rainforest with heavy rainfall (70 inches per year), high biomass and epiphytes (lichens, mosses and ferns).

Implications: Because this forest type/age comprises only about 2,914 acres of the nearly 137,000 acres of forested habitat in Mount Rainier and because it is so old management actions that minimize disturbance to it are key considerations.

### **Flooding**

The Carbon River emanates from the Carbon Glacier, one of the longest glaciers in the park with the largest volume and thickness of ice and lowest terminus in the continental U.S. It carries a huge sediment load from the Willis Wall which creates its braided form and an increasingly higher river bed. Floods have become more frequent and larger since 1971. As noted above, the 2006 flood was the largest recorded at the downstream Fairfax gauge.

Implications: The combination of the increasing height of the river bed, bed load, and the stream slope and discharge mean that floods will continue to increase damage to facilities because some sections of the road are currently at or slightly below the same level as the river. Based on recent evidence, flooding has increased in frequency and magnitude.