

**DETERMINATION OF NO IMPAIRMENT**  
**SALMON HABITAT ENHANCEMENT AND BRIDGE REPLACEMENT PROJECT**  
**MUIR WOODS NATIONAL MONUMENT**

National Park Service  
Golden Gate National Recreation Area  
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## **INTRODUCTION**

National Park Service (NPS) Management Policies 2006 (Section 1.4) requires analysis of potential effects to determine whether or not actions will impair a park's resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values. However, NPS has the management discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of the park, although that discretion is limited by the statutory requirement that the NPS must leave resources and values unimpaired unless a particular law directly and specifically provides otherwise.

The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, will harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of those resources or values. Non-resource topics are generally not subject to impairment assessment. Whether an impact could lead to impairment depends on the particular resources that will be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact on any park resource or value may, but does not necessarily, constitute impairment. An impact will be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

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

An impact may be less likely to constitute impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated. Impairment may result from visitor activities, NPS administrative activities, or activities undertaken by concessioners, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park.

An impairment determination is not made for all resource impact topics analyzed for the Proposed Action Alternative. An impairment determination is not made for land use, utilities, socioeconomics, and visitor health and safety because impairment findings only

relate to resources and values that maintain the park's purpose and significance. Additionally, this determination applies only to NPS lands.

## **Cultural Resources**

The Selected Alternatives will not result in the impairment of cultural resources. The effects of the Selected Alternatives on cultural resources within Muir Woods National Monument (MWNM) would be direct long term minor adverse impacts due to permanent removal of historic riprap and trails. Historic riprap would be permanently removed by habitat restoration activities, and a leg of the trail in Cathedral Grove would be removed; therefore, the Selected Creek Restoration Alternative adverse impacts cannot be fully mitigated. However, 52 percent of all historic riprap and 50 percent of visible historic riprap would remain. Impacts of the Selected Pedestrian Bridge Replacement Alternative would result in impacts on trails that are contributors to the historic district that would be direct, long term, and minor. Trails that are contributors to the historic district would be permanently altered by bridge lengthening and alterations to approaches; therefore, the Selected Pedestrian Bridge Replacement Alternative's adverse impacts cannot be fully mitigated. However, because the trails and historic riprap are among many cultural landscapes, buildings, and structures that are considered contributors to the historic district, impacts to historic resources would be long term, minor, and adverse. The Selected Alternatives would constitute an adverse effect under Section 106 to the individual cultural resources as well as to Muir Woods Historic District as a whole. However, this action would not render MWNM ineligible for listing in the National Register of Historic Places. Under the June 29, 2018 Memorandum of Agreement (MOA) between the NPS and SHPO, the NPS will ensure the MOA Stipulations and Minimization Measures are carried out to resolve adverse effects prior to the partial removal of the Redwood Creek Revetment, bridge replacement, and trail realignment.

## **Threatened or Endangered Species**

The Selected Alternatives would not result in the impairment of threatened or endangered species. Although there is the potential of short-term impacts on federally endangered Coho salmon, threatened steelhead trout, and their habitat from soil erosion and instream channel work during construction activities, implementation of best management practices (BMPs) would reduce the potential for impacts. The Selected Alternatives would have long-term beneficial cumulative effects on salmonid habitat; negligible impacts on the threatened northern spotted owl; and no impacts on the threatened marbled murrelet and California red-legged frog.

## **Geology and Soils**

There would be no impact to geologic resources. Impacts of the Selected Alternatives on soils would be direct, short and long term, and adverse from removal, disturbance, and compaction. Implementation of a stormwater pollution prevention plan (SWPPP) and BMPs would reduce the potential for adverse impacts on soils. Direct, long-term, beneficial impacts from the Selected Alternatives include native plant revegetation following construction and repair of gullies in Alice Eastwood Road, which would reduce erosion. Therefore, there would be no impairment of these resources.

## **Visitor Use and Experience**

Construction activities would have short-term adverse impacts on visitor use and experience. In the long-term, the Selected Alternatives would result in beneficial impacts on visitor use and experience through protection and enhancement of salmonid habitat and creek function as well as improved pedestrian bridges. These resources will not be impaired.

## **Transportation and Parking**

The Selected Alternatives would result in short-term, construction-related adverse impacts and no long-term impacts on transportation and parking. These resources will not be impaired.

## **Wildlife and Habitat**

Implementation of the Selected Alternatives would result in temporary minor adverse noise and construction impacts to wildlife habitat, but would also result in long-term beneficial impacts to wildlife habitat, especially aquatic wildlife habitat. Implementation of BMPs would avoid wildlife habitat during periods when wildlife is most sensitive. There would be no impairment of these resources.

## **Water Resources and Hydrologic Resources**

The Selected Alternatives would have the potential for short-term construction-related minor adverse effects on water quality. Any short-term, direct and indirect, adverse construction-related impacts to water resources or water quality would be avoided and minimized through implementation of a SWPPP and applicable BMPs. Over the long term, the Selected Creek Restoration Alternative would result in more natural geomorphic processes which would represent a substantial short-term and long-term beneficial effect. It is anticipated that erosion effects of the Selected Creek Restoration Alternative would represent a minor, short- and long-term adverse impact on water quality, and would have a minor effect on Redwood Creek downstream of the Proposed Action. Impacts would be reduced by bank treatments. With the implementation of SWPPP mitigation measures and BMPs, there would be no impairment to these resources.

## **Vegetation**

The Selected Alternatives would result in long-term beneficial impacts to the redwood forest. Short-term adverse and beneficial impacts to understory vegetation would occur. No impacts on rare plants are anticipated. This resource would not be impaired.

## **Soundscapes**

Implementation of the Selected Alternatives would result in temporary minor adverse noise impacts on soundscapes during construction activities, with no long-term impacts. There would be no impairment of this resource.

## **CONCLUSION**

NPS has determined that implementation of the Selected Alternatives would not constitute an impairment of the resources or values of MWNM. This conclusion is based on consideration of MWNM's purpose and significance, a thorough analysis of the environmental impacts described in the Salmon Habitat Enhancement and Bridge Replacement Final Environmental Assessment, comments provided by the consulting agencies and the general public, and the professional judgement of the decision maker guided by the direction of the 2006 NPS Management Policies.