

# Appendix G: Impairment Determination

## Definition of Impairment

*Management Policies 2006, section 1.4.5, What Constitutes Impairment of Park Resources and Values, and section 1.4.6, What Constitutes Park Resources and Values provides the following explanation of impairment:*

*Impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. The need to analyze and disclose impairment impacts originates from the National Park Service Organic Act. The Organic Act established the National Park Service with a mandate “to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”*

*An impact would 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. An impact would 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;*
- *Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park;*
- *Identified in the park’s General Management Plan or other relevant NPS planning documents as being of significance.*

Per NPS *Management Policies 2006, section 1.4.6*, park resources and values that may be impaired include:

- The park’s scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils, geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- Appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- The parks’ role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- Any additional attributes encompassed by the specific values and purposes for which the park was established.

According to guidance provided by the National Park Service Associate Director for National Resource Stewardship and Science in July 2010, impairment findings are not necessary for the following impact topics: visitor experience, socioeconomics, public health and safety, environmental justice, land use, park operations, etc., because they are generally not considered to be park resources or values according to the Organic Act. In addition, impairment is only evaluated for the preferred alternative.

## Impairment Determination

The evaluation of impairment of park resources and values below was based on the type and intensity of impacts and the types of resources affected. Overall, beneficial impacts would not constitute impairment. With respect to the intensity of impacts, negligible and minor adverse impacts are not of sufficient magnitude to constitute impairment. Moderate and major adverse impacts may constitute impairment but do not automatically do so. Rather, these impacts must be analyzed with respect to the bulleted criteria above.

The following resources were evaluated for impairment on park resources and values resulting from implementation of the preferred alternative from The Ahwahnee Comprehensive Rehabilitation Plan:

- Geologic hazards
- Soils
- Hydrology
- Vegetation
- Wildlife
- Special status species
- Air quality
- Soundscapes
- Historic sites, buildings, and landscapes
- Archeological resources

### **Geologic Hazards**

The project area is located in a geologically active area where natural forces continue to shape the landscape. Geologic hazards, such as earthquakes and rockfall, present potentially harmful conditions for people and facilities in the park. Rockfall would continue to pose a risk to the project area, as it does in many areas of Yosemite Valley. Seismic safety improvements proposed under the preferred alternative would address the minimum code required life-safety requirements of the 500-year (BSE-1) earthquake and 2500-year (BSE-2) earthquake. These actions would substantially decrease the risk to life and property at The Ahwahnee, resulting in a local, long-term, moderate, beneficial impact.

Implementation of the preferred alternative would not physically affect or result in changes that would impair geologic features. The parks geology would remain protected and available for enjoyment by park visitors.

## **Soils**

Soils in the project area are classified as ‘resilient’ or ‘other’. Resilient soils are those capable of withstanding alteration and heavier use without permanent deformation, or that recover relatively easily from alteration and disturbance. Other soils are not considered highly valued or resilient, are generally more abundant, and are not likely to support plant communities that are rare or notably diverse. Soils in the project area have been previously disturbed through the construction of the hotel complex and ongoing operations. These soils would neither be considered key to the natural and cultural integrity of the park or opportunity for enjoyment of the park, nor have they been identified as a significant resource in the park. Implementation of the preferred alternative would not result in impairment to soils, because new disturbance to surface and near-surface soils would result in minor, adverse impacts.

## **Hydrology**

The Merced Wild and Scenic River flows along the southeastern boundary of the project area, flowing east and then south as it passes The Ahwahnee cottages. Royal Arch Creek, a small seasonal tributary to the Merced River, flows north to south between the hotel and the cottages. In winter, spring, and early summer, the creek is fed by a combination of groundwater and snowmelt from the cliffs to the north of the project area. By late summer, Royal Arch Creek is dry. There is also a north-south unnamed seasonal tributary to the east of Royal Arch Creek that is fed by groundwater and snowmelt in winter, spring, and early summer, with little or no flow the rest of the year.

Excavation and construction activities to replace culverts and install a bridge at seasonal tributaries outside of the 100-year floodplain for the Merced River would result in adverse impacts associated with the temporary disruption of the surface flow and the increased potential soil erosion and sediment transport. In the long-term, there would be a minor to moderate beneficial impact on the unnamed seasonal tributary east of the cottages from removal of a low water vehicle crossing from the bed of the tributary.

Hydrologic features are one of the key natural resources for which the park was established. Because these resources, including floodplains, would not be affected beyond the current condition and there would be no change to the natural integrity of the park; the preferred alternative would not result in impairment to park hydrology.

## **Vegetation**

Vegetation in the project area consists of native and ornamental species that have been manicured to emphasize the hotel as the visual focal point. Landscaping activities immediately surrounding the hotel and associated buildings include pruning, raking, removal of invasive non-native species, fertilizing, irrigating, and transplanting or seeding with native plants. Areas that are fertilized and irrigated include the main Ahwahnee lawn, the hotel entrance (flagpole area), the wedding lawn, The Ahwahnee cottage area, the Royal Arch Creek area between the swimming pool and the driveway over the creek, the ‘wildflower meadow’, and the dining room terrace.

Under the preferred alternative construction activities would result in local, short-term, minor, adverse impacts on the size and continuity of native plant communities. Implementation of best management practices during construction would minimize impacts on surrounding vegetation communities. The removal of select trees to meet fire code requirements along fire access roads

and the hardening of select pathways to meet accessibility requirements would result in local, long-term, minor, adverse impacts on the size and continuity of native plant communities in the project area.

Vegetation is a natural resource that contributes to the park purpose. Vegetation would not be affected beyond that current condition under the preferred alternative; there would be no change to the natural integrity of the park, or discernable effects that would impair park vegetation or opportunities for visitors to experience. The preferred alternative would not result in impairment of vegetation resources.

## **Wildlife**

The park supports a diverse and abundant assemblage of wildlife. The project area is already highly disturbed from previous alterations to native habitat and normal hotel operations. With the implementation of mitigation measures for wildlife species (Appendix E), temporary noise and visual disturbance from construction activities would result in local, short-term, minor, adverse impacts. There would be a local, long-term, minor, adverse impact on upland habitat from removal of trees and some road widening for fire access road improvements. Implementation of mitigation measures with a focus upon avoidance, limiting construction activities during breeding seasons, or conducting detailed surveys immediately before construction, would minimize impacts on wildlife habitat and populations.

Wildlife is a natural resource that contributes to the park purpose. With implementation of the preferred alternative, wildlife in the project area would not be affected beyond the current condition; there would be no change to the natural integrity of the park, or discernable effect that would impair the park's wildlife for opportunities for visitors to experience it. The preferred alternative would not result in impairment of wildlife resources.

## **Special Status Species**

Thirty-eight wildlife species currently have special status under either California or federal endangered species legislation, two of which are believed extirpated from the park. Many plants endemic to the Sierra Nevada are considered rare within the park and are given special protection. These species would be considered key to the natural integrity of the park and are considered significant by their rare nature.

The project would occur in suitable habitat and foraging areas for special status bird and bat species. The implementation of mitigation measures (Appendix E) with a focus upon avoidance, limiting construction activities during breeding seasons, limiting construction activities to daytime hours, conducting detailed surveys immediately before construction, and limiting areas of disturbance, would minimize impacts on these species. With mitigation, implementation of the preferred alternative would not impair special status species.

## **Air Quality**

There are many sources of air pollutants in the park that affect the project area, including sources outside of the park (primarily from the Central Valley) and in-park sources, such as vehicle emissions and campfires.

There are currently no known sources of emissions from the project area; the preferred alternative would result in very localized, short-term, negligible to minor, increases in pollutants from dust

and vehicle emissions. Due to the short-term and minor nature of these impacts, implementation of the preferred alternative would not impair air quality.

Implementation of the preferred alternative would result in short-term, minor, adverse impacts on local air quality due to construction-related dust, equipment and vehicle emissions. Existing heating and cooling systems would be upgraded or replaced with more efficient models, mechanical ventilation would be provided throughout the hotel and cottages, and low-emission finish materials would be used where possible. This would result in a long-term, minor, beneficial impact on indoor, local, and regional air quality.

Because this resource, which contribute to the park's purpose, would not be affected beyond the current condition and there would not be any change in the natural of cultural integrity of the park, the preferred alternative would not impair park air quality or opportunities for visitors to experience it.

### **Soundscapes**

Protecting natural sounds is important both to the visitor experience and the ecological integrity of natural resources in the park. Natural sounds, such as wildlife, wind in the trees, and running water, are all present in the project area. Activities associated with regular operations at The Ahwahnee site also affect ambient sound in the vicinity of the project area. These noises include human voices and vehicle noise. The type of noise generated during implementation of the preferred alternative would include the operation of heavy equipment, voices of workers, handheld manual and power tools (e.g., hammers, drills, and saws), and noise associated with heavy vehicles. The increased noise levels would be short-term; no long-term increase in noise would result from the preferred alternative. Due to the short-term and minor nature of these impacts, implementation of the preferred alternative would not result in impairment of natural soundscapes.

### **Historic Sites, Buildings, and Cultural Landscapes**

The Ahwahnee is located on a 35-acre site near the east end of Yosemite Valley at the base of the Royal Arches formation, north of the Merced River. The Ahwahnee was originally listed on the National Register of Historic Places (NRHP) in 1977 and was designated a National Historic Landmark in 1987. It was also listed as a Developed Area within the Yosemite Valley Historic District in 2006.

Completed in 1927 and designed by architect Gilbert Stanley Underwood, The Ahwahnee is still considered the greatest of the national park lodges. Architecturally, it is a symbol of design excellence, 1920s architectural ideals, and Rustic style architecture on a previously unimagined scale. Historically, The Ahwahnee is significant for its role in the development of tourism, national parks, and the concessions industry and for American citizens' then-emerging appreciation of the National Park System and the great outdoors.

Facilities at The Ahwahnee are not fully compliant with current fire protection and building codes, recommended seismic safety practices, and accessibility codes and guidelines. Many of the electrical, plumbing, and mechanical systems are aging and need to be replaced and updated. In addition, some historic hotel finishes and landscape components have deteriorated or been altered over the years, potentially affecting the historic integrity of this National Historic Landmark.

The preferred alternative provides for fire/life-safety, seismic, accessibility, and building code compliance; maximizes space efficiency; and enhances visitor experience and the quality of life for employees by using minimally invasive techniques. The preferred alternative also provides for historic preservation measures and rehabilitation actions for a variety of historic spaces and features of the historic property.

Alternative 3 would result in an adverse effect on the National Historic Landmark from actions that would bring the hotel into compliance with current fire/life-safety, accessibility, and seismic codes and standards. In recognition of the potential for adverse effects to the historic property, the National Park Service and the California State Historic Preservation Officer developed a Programmatic Agreement in January 2011 in accordance with 36 CFR Part 800.14(b). The 2011 Programmatic Agreement documents the terms and conditions agreed upon during consultation to resolve the adverse effects of the proposed action.

With implementation of the 2011 Programmatic Agreement to resolve adverse effects, there would not be any change in the overall cultural integrity of the park. Therefore, the preferred alternative would not impair park historic buildings, sites, or landscapes, or opportunities for visitors to experience them.

## **Archeological Resources**

Archeological resources are considered key to the cultural integrity of Yosemite National Park. Yosemite Valley includes over 100 archeological sites that evidence thousands of years of human occupation. Ground disturbing activities under the preferred alternative would have the potential to affect these sites, but with mitigation stipulated in the 2011 Programmatic Agreement, including fencing off the site, briefing of project personnel, and the presence of an American Indian monitor, would resolve the potential adverse effect to archeological sites. Therefore, implementation of the preferred alternative would not impair archeological resources.