

## DETERMINATION OF NO IMPAIRMENT

### *Cottonwood Cove and Katherine Landing Development Concept Plans*

Lake Mead National Recreation Area  
December 2014

#### Impairment Prohibition

The National Park Service (NPS) *Management Policies 2006* (§ 1.4) requires analysis of potential effects to determine whether or not proposed actions would impair a park's resources and values. The fundamental purpose of the national park system, established by the *Organic Act* and reaffirmed by the *General Authorities Act*, as amended, begins with a mandate to conserve park 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, the laws do give NPS the management discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of the park. 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, 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 (NPS Management Policies 2006). Whether an impact meets this definition depends on the particular resources that would 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 past or planned future impacts.

An impact on any park resource or value may, but does not necessarily, constitute impairment. 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, 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 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. 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.

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The park resources and values that are subject to the no-impairment standard include:

- The parks scenery, natural and historic objects, 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 park's 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.

#### **Description of Park Purpose**

The enabling legislation for Lake Mead National Recreation Area (Public Law [PL] 88-639) established the recreation area "for the general purposes of public recreation, benefit, and use, and in a manner that will preserve, develop and enhance, so far as practicable, the recreation potential, and in a manner that will preserve the scenic, historic, scientific, and other important features of the area, consistent with applicable reservations and limitations relating to such area and with other authorized uses of the lands and properties within such area."

The 1986 General Management Plan provided the overall management direction for Lake Mead National Recreation Area. The plan established management zones to accommodate increasing visitor use while protecting park resources. The 2003 Lake Management Plan further refined the management of Lakes Mead and Mohave, the associated shoreline, and developed areas around the lakes to ensure the protection of park resources while allowing a range of recreational opportunities to support visitor needs.

#### **Impairment Determinations for the Selected Alternative**

Impairment determinations are not necessary for visitor use and experience and socioeconomics because impairment findings pertain only park resources and values. These impact topics are not generally considered to be park resources or values according to the *Organic Act*, and cannot be impaired the same way that an action can impair park resources and values. Among the topics addressed in the Final EIS, those which are evaluated for impairment native plant communities and soils, wildlife, threatened, endangered, and special status species, floodplains, archeological resources, historic structures, cultural landscapes, and ethnographic resources.

#### ***Native Plant Communities and Soils***

Desert creosote-bursage shrub communities and desert wash communities typically surround the developed areas. Soils in the recreation area are generally shallow, friable, wind-deposited, or alluvial materials that are susceptible to wind and water erosion.

Most construction activities associated with rehabilitation, replacement, or redesign of facilities at both developed areas would occur within or adjacent to previously disturbed areas and currently developed sites and would have minimal additional impacts on soils or native vegetation that is a mixture of native and nonnative plants. The implementation of the Selected Alternative will primarily result in be long-term, minor, adverse impacts to native plant communities and soils from facility construction and associated visitor use in previously disturbed areas. Approximately 44 acres of local, long-term minor to moderate adverse impacts would result from development of additional lands and construction of flood control structures. Local beneficial effects would also result from the selective removal of existing nonnative invasive species and restoration of some currently developed sites. Mitigation measures and best practices will be utilized as described in previously.

Overall, soils and native plants will be affected over a relatively small area or multiple sites and there may be a change in the abundance or distribution of local plant populations, but the viability of regional populations will not be affected. Therefore the Selected Alternative will not result in impairment of native plant communities and soil resources.

### ***Wildlife***

The desert, riparian, and aquatic ecosystems present at the Lake Mead National Recreation Area provide habitat for a rich diversity of animal species. Wildlife populations and their habitats in the developed areas have been altered by past human actions. These areas have marginal habitat value. The rehabilitation, replacement, or redesign of facilities will primarily occur within existing areas of concentrated human use and development and not in areas of continuous, undisturbed habitat. The adverse impacts to terrestrial wildlife will be long-term and minor, affecting individuals from wildlife populations in local areas, but not resulting in loss of population viability for these species. Similarly, impacts from in-water work and from construction in or near the lakeshore will be short term and minor and will not adversely affect fish populations. Therefore the Selected Alternative will not result in impairment of wildlife resources.

### ***Threatened, Endangered, and Special Status Species***

The alternative may affect, but would not be likely adversely affect the Southwestern willow flycatcher, razorback sucker, bonytail chub, or their critical habitat. The selected alternative will be likely to adversely affect the desert tortoise, banded Gila monster, and Western burrowing owls although impacts will be local. Potential impacts on the desert tortoise and banded Gila monster include temporary or permanent loss of suitable habitat from new development and incidental harassment and possibly loss of individuals from construction activities. There will be no disturbance to designated critical habitat for the desert tortoise. Potential impacts to Western burrowing owls will include short-term disturbance from construction activities and long-term local loss of habitat from new development.

All mitigation measures including those identified as part of the 2010 programmatic biological opinion for the threatened Mojave desert tortoise will be implemented to minimize loss and long-term degradation and fragmentation of habitat, such as soil compaction, erosion, crushed vegetation, or introduction of nonnative invasive plants or weeds as a result of project activities. Therefore the Selected Alternative will not result in impairment of Threatened, Endangered, and Special Status Species.

### ***Floodplains***

The flood hazard would be greatly reduced at both developed areas through the use of structural and nonstructural protection, resulting in a long-term substantial benefit to safety for people and property

in the floodplains. Protecting life and property in the floodplains is considered to be a higher priority than restoring natural floodplain values of these flash floodplains, which are the very qualities that endanger life and property. Thus, the natural floodplain values in both developed areas, such as natural flood flows, sedimentation processes, vegetation, or groundwater recharge have been and will continue to be highly altered by development. Construction of additional flood control structures that divert and channel flood flows will further alter floodplains above and through the developed areas as will paving of some parking areas. However, most of these new impacts will be to previously disturbed lands and adverse impacts on floodplain values will be long term minor to moderate. Therefore, there will be no impairment to floodplains as a result of implementing the Selected Alternative.

### ***Archeological Resources***

The selected alternative will have short- and long-term, no or negligible to minor adverse impacts to archeological resources located in the area of affect in both developed areas and the cove adjacent to Katherine Landing.

To date, 14 prehistoric archeological sites and 1 historic site have been recorded in and around the Cottonwood Cove Developed Area. Over 20 archeological sites have been recorded in and around the Katherine Landing Developed Area. Seven of these are prehistoric sites. Twelve of the sites are historic and related to mining activity. The sites have not been assessed for national register significance, but are managed as though they were listed.

To mitigate potential adverse impacts to recorded archeological resources within the developed areas and coves adjacent to Katherine Landing, prior to any construction activities, the National Park Service plans to use contract language requiring the construction contractor to attend preconstruction meetings with park archeologists and other appropriate parties as identified by the park. During these meetings, park personnel and the contractor will develop archeological site protection and avoidance measures that will be implemented prior to initiating construction activities. The types of measures that will be developed will be site and action specific, but include the presence of archeological monitors during construction activities and/or the use of temporary fencing or other materials to establish construction boundaries near sites. In addition, the park will develop a plan of action for inadvertent archeological discoveries during construction. The avoidance measures and inadvertent discovery plan will be documented in an archeological monitoring and inadvertent discovery plan. These plans will be guided by mitigation programmatic agreements currently being developed through consultations with the Nevada and Arizona state historic preservation officers.

Preconstruction meetings and development and implementation of the archeological monitoring and inadvertent discovery plan will result in avoidance of archeological deposits within the developed areas and coves adjacent to Katherine Landing.

The selected alternative will not result in impairment because the archeological resources will be avoided and impacts to archeological resources will be minimized by appropriate mitigation measures.

### ***Historic Structures***

The selected alternative will have short- and long-term impacts ranging from beneficial to potential major adverse impacts.

Both developed areas are Mission 66 designed landscapes. Cottonwood Cove has been determined eligible for listing on the national register. Katherine Landing has not been evaluated. Structures within

the Cottonwood Cove Developed Area are contributing, character-defining features of the designed landscape. If the Katherine Landing Developed Area were to be determined national register eligible, the original Mission 66 structures will also be contributing elements to the landscape. The proposed removal and/or remodeling of structures potentially could negatively impact the structures. However, the use of sustainable design and character will be employed in ways that is sympathetic to the existing architecture and will be employed in accordance to the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. This will result in no adverse effects or negligible long-term effects because architectural features contributing to the significance of these structures will not be altered. However, the removal of the amphitheater at Katherine Landing will be an adverse impact. Other proposed actions (e.g., new picnic facilities, trail systems, etc.) will have no adverse effects since the actions will be cited away the Mission 66 structures. Finally, rehabilitating the amphitheater benches and landscaping at Cottonwood Cove will be a long-term, beneficial impact.

The selected alternative will not result in impairment because changes to the historic structures will be sympathetic to the existing architecture, changes will be made in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, and many proposed actions of the alternative will be sited away from the structures contributing to the designed landscapes. In addition, changes to the historic structures will be guide by mitigation programmatic agreements being developed in consultation with the Nevada and Arizona state historic preservation officers.

### ***Cultural Landscapes***

The selected alternative proposes changes to the developed areas that will modernize campgrounds, traffic circulation, and developed area facilities so they better meet the contemporary needs of visitors. However, converting the character-defining herringbone pattern campgrounds to accommodate RV campers, removal of the amphitheater are Katherine Landing, and converting the trailer village to RV campgrounds at both developed areas will change the function and appearance of character-defining features of the designed landscape. At Cottonwood Cove, which has been determine eligible for listing on the national register, this actions will constitute permanent, major adverse impacts. At Katherine Landing, which has not been evaluated for national register significance, the proposed actions potentially will be adverse actions.

However, retaining the lower campground and updating the amphitheater benches and landscape at Cottonwood Cove, using sympathetic architecture in making changes to contributing structures, following *Secretary of the Interior's Standards for the Treatment of Historic Properties*, and adhering to mitigations established in the programmatic agreements be developed in consultation with the Nevada and Arizona state historic preservation officers will help retain the feel and appearance of designed landscapes. While permanent, major adverse impacts will be sustained by some of the landscapes' character-defining features, overall function and general appearance of the landscapes will remain.

Therefore, the selected alternative will not result in impairment because the functional and overall appearance of the cultural landscapes will be retained.

### ***Ethnographic Resources***

The selected alternative will have short- and long-term, no or negligible to minor adverse impacts to ethnographic resources located in the area of affect in both developed areas and the cove adjacent to Katherine Landing.

Within both developed areas the potential for ethnographic resources is very low. In most cases, ethnographic resources are one and the same as archeological resources. If ethnographic resources were identified within the developed areas, they will be documented and ground-disturbing activities will be sited away from the resources. Prior to any construction activities, the National Park Service plans to use contract language requiring the construction contractor to attend preconstruction meetings with park archeologists and other appropriate parties as identified by the park. The archeological monitoring and inadvertent discovery plan developed for archeological resources will also apply to the majority of any potential ethnographic resources. If avoidance is not possible, the impacts to ethnographic resources will be mitigated through documentation in consultation the appropriate state historic preservation officer. Mitigation measures for ethnographic resources will also be addressed in the mitigation programmatic agreements being developed in consultation with the Nevada and Arizona state historic preservation officers.

Preconstruction meetings and development and implementation of the archeological monitoring and inadvertent discovery plan will result in avoidance of ethnographic resources within the developed areas and coves adjacent to Katherine Landing.

The selected alternative will not result in impairment because the ethnographic resources will be avoided and impacts to ethnographic resources will be minimized by appropriate mitigation measures.