

FINDING OF NO SIGNIFICANT IMPACT

Exotic Plant Management Plan Environmental Assessment

February 2010

Lake Mead National Recreation Area
Clark County, Nevada and Mohave County, Arizona

PURPOSE AND NEED

The purpose of the Exotic Plant Management Plan is to provide a framework to maintain native plant communities by preventing and removing exotic plants using an integrated approach that maximizes the effectiveness of the action while minimizing the undesirable impacts of the exotic plant and the management action. Exotic plant management is a key component of the parks efforts to maintain, and restore if needed, native plant communities and ecological processes for the purpose of protecting the integrity of the park's terrestrial and aquatic ecosystems.

This action is needed to avoid, minimize, and mitigate the impacts of exotic plants, which often cause irreparable damage to natural resources. The ecological balance of plants, animals, soil, and water achieved over many thousands of years is destroyed. As native plants are displaced, wildlife populations that rely on the plants for food and shelter also decline. Exotic plants may reduce or deplete water levels, or alter runoff patterns and watershed processes, thus diminishing both the land and water quality. Some exotic plants release toxic chemicals into the soil or harbor diseases, increasing the stress on native plants. Some nitrogen-fixing exotic plants increase soil fertility, allowing other exotic plants to outcompete plants that have evolved in the nutrient-poor native soils. Exotic plants that interbreed with native plant species can contaminate native gene pools. The growth and spread of exotic plants can also change fire frequency, size, and intensity, resulting in an altered ecosystem.

SELECTED ACTION

The Selected Action is the environmentally preferred alternative, which was identified and analyzed in the environmental assessment (EA) as the proposed action. No changes have been incorporated into the Selected Action as a result of public comment. Under the Selected Action, Lake Mead (LAKE) National Recreation Area (NRA) will implement a comprehensive Exotic Plant Management Plan implement that will serve to direct exotic plant management activities undertaken by the National Park Service (NPS) and cooperators over the next twenty years. The Plan will prescribe specific integrated pest management strategies and actions to address prevention of new exotic plant invasions, early detection and eradication of incipient exotic plant populations, and containment and control of established populations. For any work proposed for designated wilderness, only those actions necessary for wilderness protection will be undertaken.

Minimum tools will include manual and mechanical treatments, herbicide use, and in some cases, prescribed fire. The Plan will also include standardized data management protocols, a monitoring strategy, and research priorities. All of these strategies and actions will also conform to the concept of adaptive management, whereby the Park is continually learning from experience and improving the effectiveness and efficiency of its exotic plant management effort.

NO ACTION ALTERNATIVE

Under the No Action alternative, exotic plant management activities would continue on a project-by-project basis. These projects may be undertaken by the NPS, by interagency organizations, or by various cooperators. Such projects would continue to be "ad hoc" - - that is, done in response to a specific situation or problem without considering wider or longer-term issues. As a result, most projects would focus on site-led priorities, such as removal of exotic plants in springs or rare plant habitats, early detection and eradication of exotic plants along vector corridors, and weed prevention measures incorporated into a construction contract.

ALTERNATIVES CONSIDERED BUT DISMISSED

An alternative prohibiting the use of herbicides was dismissed because many species of exotic plants, particularly perennial species with extensive root systems, are inherently resistant to control by manual, mechanical, biological, or cultural treatments. If not treated with herbicide, these species would continue to expand their populations within and beyond the park. Therefore, this alternative would not meet the purpose and need.

An alternative not to treat exotic plants was also dismissed. In addition to not meeting the purpose and need, this alternative is inconsistent with NPS policy, federal executive orders, and Nevada and Arizona state laws that mandate that exotic plants and their effects on other resources be controlled.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is the alternative that will promote the National Environmental Policy Act (NEPA), as expressed in Section 101 of NEPA. This alternative will satisfy the following requirements:

- 1) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- 2) Assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- 3) Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable or unintended consequences;

- 4) Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- 5) Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and,
- 6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The Council on Environmental Quality states that the environmentally preferable alternative is "the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources (46 FR 18026 – 46 FR 18038)." According to the National Park Service (NPS) NEPA Handbook (DO-12), through identification of the environmentally preferred alternative, the NPS decision-makers and the public are clearly faced with the relative merits of choices and must clearly state through the decision-making process the values and policies used in reaching final decisions.

The Selected Action is the environmentally preferable alternative because overall it would best meet the requirements in Section 101 of NEPA. Compared to the No Action Alternative, it more effectively fulfills the responsibilities of each generation as trustee of the environment for succeeding generations by allowing for better, more efficient control of non-native plants and the impacts they create on the environment. Through the use of prioritization schemes, coordinated research and monitoring, and adaptive management, all of which are lacking from the No Action Alternative, it allows for non-native plant control while minimizing degradation, health and safety risks, and other undesirable or unintended consequences. More effective management of non-native plants is necessary to preserve important natural and cultural aspects of our national heritage; without such management, non-native species will continue to adversely affect native vegetation and the wildlife that depends on it.

MITIGATION AND MONITORING

Mitigation measures are specific actions designed to minimize, reduce, or eliminate impacts of alternatives and to protect Lake Mead NRA resources and visitors. The following table outlines mitigation measures that will be implemented under the Selected Action.

Resource Area	Mitigation Measure	Responsible Party
Geology and Soils	Best Management Practices for herbicide use, including selection of the proper chemical and application method, will minimize any unintended or deleterious effects of herbicides in the environment.	LAKE Vegetation Program Manager

Vegetation	When seeding or replanting is necessary, native-species-preferably from local genetic stocks- will be used exclusively. A mix of species will be selected that closely represents the plant composition for the site being reseeded or revegetated.	LAKE Restoration Biologists
Special Status Species	Field personnel will attend a desert tortoise orientation class every three years.	LAKE Exotic Plant Technicians
	Desert tortoise surveys will occur before prescribed burns during their active season (March-October).	LAKE Wildlife Biologists
	Southwestern willow flycatcher surveys will occur before prescribed burns in potential habitat.	LAKE Wildlife Biologists
	No treatments will occur in Southwestern willow flycatcher habitat during the nesting season (May-August).	LAKE Exotic Plant Technicians
	Treated areas in potential Southwestern willow flycatcher habitat would be restored with native vegetation.	LAKE Restoration Biologists
Wilderness	For any project or proposal not adequately considered in the EA, further compliance and a separate Minimum Requirement Analysis (MRA) will be completed. Similarly, proposed research proposals occurring in wilderness will consider the benefits of what can be learned, against the impacts on the wilderness resource and values, and a separate MRA will be completed to determine the appropriateness of conducting the research in wilderness and to identify the minimum tool. All MRAs will be reviewed by the Wilderness Coordinator, Environmental Compliance Specialist, and Superintendent, with opportunity for public review when applicable.	LAKE Wilderness Coordinator
	Leave No Trace principles will be followed when working in wilderness areas.	LAKE Exotic Plant Technicians
	Projects proposing the use of prescribed fire in wilderness areas will follow procedures outlined in the Fire Management Plan or to implementation plans subsequently developed (e.g. burn plan, fuel treatment plan, etc.). As explained in the Fire Management Plan, each prescribed burn requires a separate MRA to determine whether the use of fire is the minimum necessary to accomplish resource objectives. Implementation of Minimum Impact Suppression Tactics would help prevent unnecessary damage to the wilderness resource from fire	LAKE Fire Management Officer

	suppression activities.	
Cultural Resources	All necessary steps will be taken to avoid cultural resources located in project areas. If the resources cannot be avoided, the NPS will consult with the Arizona or Nevada State Historic Preservation Office (SHPO) to determine the significance of the resources and the potential effect of the project on the resources. If the effect is adverse, the NPS will continue consultation with the SHPO to develop a plan to mitigate the adverse effect.	LAKE Archaeologist
Safety and Visitor Use and Experience	No weed treatment activities would occur in areas of high public use during peak visiting seasons (Memorial Day to Labor Day).	LAKE Exotic Plant Technicians
	Herbicide applicators would follow all environmental protection and personal safety requirements identified on product labels and material safety data sheets.	LAKE Exotic Plant Technicians

WHY THE SELECTED ACTION WILL NOT HAVE A SIGNIFICANT IMPACT ON THE HUMAN ENVIRONMENT

The NPS used the NEPA criteria to evaluate whether the selected action will have a significant impact on the environment. As defined by 40 CFR 1508.27, significance is determined by examining the following criteria:

1. Impacts that may have both beneficial and adverse aspects and which on balance may be beneficial, but that may still have significant adverse impacts which require analysis in an environmental impact statement:

No significant adverse impacts were identified that will require further analysis in an environmental impact statement.

2. The degree to which public health and safety are affected:

There are no negative impacts to public health or safety, and the public will benefit from targeted exotic plant control in areas important to visitors.

3. Any unique characteristics of the area such as proximity to historic or cultural resources, wild and scenic rivers, ecologically critical areas, wetlands or floodplains:

No wild and scenic rivers, ecologically critical areas, wetlands or floodplains are located within the project area, and there will be no unacceptable impacts to cultural resources.

4. The degree to which impacts are likely to be highly controversial:

There were no highly controversial impacts identified during preparation of the EA or during the public review period.

5. The degree to which the potential impacts are highly uncertain or involve unique or unknown risks:

No highly uncertain, unique, or unknown risks were identified during the preparation of the EA or during the public review period.

6. Whether the action may establish a precedent for future actions with significant effects, or represents a decision in principle about a future consideration:

No significant adverse impacts were identified during preparation of the EA. Implementation of the Selected Action neither establishes a NPS precedent for future actions with significant effects, nor represents a decision in principle about a future consideration.

7. Whether the action is related to other actions that may have individual insignificant impacts but cumulatively significant effects:

The EA analyzed impacts related to geology and soils, vegetation, wildlife, special status species, water resources, wilderness, cultural resources, visual resources, park operations, safety and visitor use and experience, and adjacent lands. The beneficial effects of the actions proposed in the EA are aligned with other land management and habitat conservation plans in the area, and the negative impacts are minor to moderate. There are no cumulatively significant negative effects of the Selected Action.

8. The degree to which the action may adversely affect historic properties in or eligible for listing in the National Register of Historic Places, or other significant scientific, archeological, or cultural resources:

There will be no unacceptable impacts and no impairment to cultural resources. Implementation of the Exotic Plant Management Plan provides for greater protection of cultural resources than does the No Action alternative.

9. The degree to which an action may adversely affect an endangered or threatened species or its habitat:

Implementation of the Selected Action is not likely to adversely affect endangered or threatened species. Mitigation has been developed to minimize risks to these species, and the implementation of the Exotic Plant Management Plan will benefit the species by improving the habitat on which they depend.

10. Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment:

The Selected Action violates no federal, state, or local environmental protection laws. The EA for the Exotic Plant Management Plan was prepared using the guidelines detailed in *NPS Management Policies 2006*, and the Selected Action meets all NPS requirements.

PUBLIC INVOLVEMENT AND AGENCY CONSULTATIONScoping

A 30-day public scoping period occurred from August 19 to September 19, 2003. A scoping press release was sent to area media and was also posted on the Lake Mead NRA internet website. Two written comments were received during the scoping period. One comment from the Nevada Department of Wildlife expressed its support of the invasive plant management planning effort, particularly at it relates to park lands in Nevada and the Department's Overton Wildlife Management Area. Another comment was received from a Las Vegas resident advocating that Park efforts be focused on finding beneficial uses of saltcedar rather than removing the trees.

Agency Consultation

The Selected Action includes activities that may require consultation with, or permits from, other agencies. When specific actions are proposed, the following may first be necessary:

- Consultation with the U.S. Fish and Wildlife Service
- Permits from the Army Corps of Engineers
- State Water Quality permits
- Consultation with the State Historic Preservation Offices

Potential impacts were factored into the EA analysis, and based on prior communications with these agencies, the NPS is already aware of the project stipulations that can be expected. Full compliance will occur before specific projects are implemented.

Public Review and Comments

On December 8th, 2010 a press release announcing a 30-day public review period for the environmental assessment was sent to television stations, newspapers, magazines, and radio stations in Las Vegas, Henderson, Boulder City, Pahrump, Overton, Logandale, Laughlin, Nevada; Meadview, Kingman, Phoenix, and Bullhead City, Arizona; and Needles and Los Angeles, CA. An announcement appeared in the Las Vegas Sun Home News. Notification was also published on the Lake Mead NRA website (<http://www.nps.gov/lake>).

Lake Mead NRA's mailing list is comprised of 245 entities including federal, state, and local agencies; tribes; individuals; businesses; libraries; and organizations. The environmental assessment was distributed 44 individuals, agencies, and organizations likely to have an interest in this project. Entities on the park mailing list that did not receive a copy of the environmental assessment received a letter notifying them of its availability and methods of accessing the document.

The environmental assessment was published on the Lake Mead NRA internet website at (<http://www.nps.gov/lake>) and on the NPS PEPC internet website at <http://parkplanning.nps.gov/>. Copies of the environmental assessment were available at area libraries, including: Boulder City Library, Clark County Community College (North Las Vegas), Clark County Library, Las Vegas Public Library, Green Valley Library (Henderson), James I. Gibson Library (Henderson), Sahara West Library (Las Vegas), Mohave County Library (Kingman, AZ), Sunrise Public Library (Las Vegas), University of Arizona Library (Tucson, AZ), University of Nevada Las Vegas James R. Dickinson Library, Meadview Community Library, Moapa Valley Library (Overton, NV), Mesquite Library, Mohave County Library (Lake Havasu City, AZ), Laughlin Library, Searchlight Library, and Washington County Library (St. George, UT).

Public comments were accepted through January 14, 2011. The Division of State Lands, the State Historic Preservation Office, and the Bureau of Reclamation supported the document as written. The Nevada Department of Wildlife (NDOW) commented that the restoration of redefined riparian zones can benefit fish populations. The Exotic Plant Management Plan outlines a strategy for when restoration is warranted following exotic species removal, and the NPS will coordinate with NDOW as the opportunities arise. The Bureau of Land Management, Arizona Strip District Office, commented about the importance of coordination between offices in the management of Grand Canyon-Parashant National Monument, and in response NPS will ensure proper communication occurs for all actions occurring adjacent to its boundary.

IMPAIRMENT OF PARK RESOURCES OR VALUES

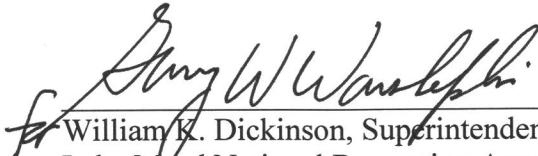
The implementation of the selected action will not constitute an impairment of Lake Mead NRA resources or values. Impacts documented in the EA and summarized above will not affect resources or values key to the natural and cultural integrity of the Lake Mead NRA, or alter opportunities for the enjoyment of the Lake Mead NRA. The Selected Action will not impair Lake Mead NRA resources and will not violate the National Park Service Organic Act. This conclusion is based on a thorough analysis of the impacts described in the EA, and the professional judgment of the decision maker, in accordance with *NPS Management Policies 2006*. As described in the EA, implementation of the selected action will not result in major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Lake Mead NRA, (2) key to the natural or cultural integrity of Lake Mead NRA, or (3) identified as a goal in Lake Mead NRA's *General Management Plan* or other relevant NPS planning documents.

CONCLUSION

Based on the analysis completed in the EA, the capability of the mitigation measures to reduce, avoid, or eliminate impacts, and with due consideration of minimal public response and future agency coordination, the National Park Service determined that the Selected Action does not constitute an action that normally requires the preparation of an environmental impact statement.

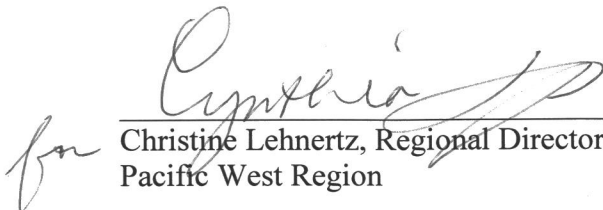
Negative environmental impacts that could occur are minor to moderate in effect. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, known ethnographic resources, or other unique characteristics of the region. There are no significant impacts to the affected environment. There are no highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence identified. Implementation of the Selected Action would not violate any federal, state, or local environmental protection law. Therefore, in accordance with the National Environmental Policy Act of 1969, and regulations of the Council on Environmental Quality (40 CFR 1508.9), an environmental impact statement will not be prepared for this project, and the Selected Action may be implemented as soon as practicable.

Recommended:


for William R. Dickinson, Superintendent
Lake Mead National Recreation Area

2/9/11
Date

Approved:


for Christine Lehnertz, Regional Director
Pacific West Region

2-22-11
Date