Northern Rocky Mountains Invasive Plant Management Plan

National Park Service
U.S. Department of the Interior

Pacific West Region
Intermountain Region

City of Rocks National Reserve
Craters of the Moon National Monument and Preserve
Fossil Butte National Monument
Golden Spike National Historic Site
Grant-Kohrs Ranch National Historic Site
Hagerman Fossil Beds National Monument
Little Bighorn Battlefield National Monument
Minidoka National Historic Site
Nez Perce National Historical Park: Bear Paw Battlefield
Nez Perce National Historical Park: Big Hole National Battlefield

Purple Loosestrife and Russian Olive at Hagerman Fossil Beds

January 2011

United States Department of the Interior • National Park Service • Pacific West and Intermountain Regions

Park Addresses and Contacts

City of Rocks National Reserve
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Planning Representatives: Kristen Bastis andTrenton Durfee

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Planning Representative: Arvid Aase

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Nez Perce National Historical Park / Big Hole National Battlefield
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Planning Representatives: Jimmer Stevenson and Jason Lyon

How this Environmental Assessment (EA) is Organized

i. Executive Summary: This section briefly recaps the contents of the EA, including the purpose and need for the project, an overview of the alternatives and other key project information.

ii. Table of Contents: This lists the chapters and primary sections and where they may be found within the document.

Chapter I. Introduction: This chapter introduces the parks, their purpose and significance and provides some background information about the plan.

Chapter II. Purpose and Need: This chapter identifies the purpose and need for the proposed actions and the planning background for the project, including related laws, policy, park plans and public participation to date. It also highlights the purpose and scope of the EA and the purpose and significance of the parks. *Impact Topics* describes the potentially affected resources and laws or policy related to their inclusion in this EA.

Chapter III. Alternatives: This chapter describes the alternative courses of action that may be taken, including the reasons for dismissing options that do not meet criteria for inclusion. It also identifies and provides analysis related to the selection of the Environmentally Preferred Alternative and includes an *Alternative Comparison Chart* (Table 35) to more easily discern the differences between the alternatives.

Chapter IV. Affected Environment: This chapter describes the existing environment by resource category. Included are resources that may be affected (changed) either beneficially or adversely by implementation of the proposed alternatives.

Chapter V. Environmental Consequences: This chapter provides a comparison of the beneficial and adverse effects associated with the alternatives including cumulative impacts. *Methodology* identifies the means by which impacts to various resources are analyzed. As in Chapter III, a comparison table is provided – *Impact Comparison Chart* (Table 38) – to assist in discerning the differences in projected impacts between the alternatives.

Chapter VI. Consultation and Coordination (List of Persons and Agencies Consulted / Preparers): This chapter provides additional information about public and internal scoping, preparation and review of the EA.

Chapter VII. References: This section provides bibliographical information for sources cited in this EA.

Chapter VIII: Glossary: This section defines the abbreviations and terms used in this document.

APPENDICES

Appendix A: 11-Step Integrated Pest Management (IPM) Process: This process guides the development and implementation of an integrated pest management strategy in the National Park Service.

Appendix B: Natural History and Control of Nonnative Invasive Plants found in 10 Northern Rocky Mountains Parks (detached): This section describes many of the plants for which treatment would be prescribed in the parks. While not comprehensive, it covers most nonnative invasive species affecting the parks.

Appendix C: NRM-EPMT Treatment of Nonnative Invasive Plants in the 10 Parks (2005-2009): These tables summarize the acreage treated by the NRM-EPMT during this period.

Appendix D: Laws, Regulations, Executive Orders, Policies and Park Planning Documents: This section describes the laws, regulations and policies applicable to the Invasive Plant Management Plan.

Appendix E: State Noxious Weed Lists: This section identifies state-listed noxious weeds for Idaho, Montana, Utah and Wyoming, the four states in which the parks included in this plan are located.

Appendix F: Pesticide Handling Procedures: These are standard safety procedures followed by the parks for pesticide use.

Appendix G: Sample (Nez Perce National Historical Park) Safety Plans: These sample plans used by the parks include, but are not limited to the following: Respirator Plan, Hazard Reduction Plan and Health and Safety Plan.

Appendix H: Northern Rocky Mountains Parks' Herbicide Use (2005-2009): This list is a summary of NRM-EPMT data for the 10 parks over the past five years.

Appendix I: Forms (Pesticide Use Proposal, Biological Use Proposal and NRM EPMT Data Collection): The first two forms are used by the parks to gain approval for use of pesticides or biological control agents. The last is used by the NRM-EPMT for each site visit to a park.

Appendix J: List of Potential New Invaders: This is a list of nonnative invasive species the parks would be looking for during monitoring.

Appendix K: Impact Avoidance, Minimization and Mitigation Measures: This section highlights the actions parks would take associated with managing each affected resource to avoid, minimize or mitigate the impacts caused by implementation of the proposed plan.

Appendix L: Top 10 Early Detection Rapid Response (EDRR) Plants in the 10 Northern Rocky Mountains Parks (2010) This is a list (for each of the 10 parks) of the top 10 nonnative invasive species that could potentially invade the park.

Appendix M: Alien Plant Ranking System (APRS) (detached) and APRS Questions: This appendix contains the standardized ranking system that would be used by the parks to assist in determining the highest priority nonnative invasive plants to treat.

Appendix N: Craters of the Moon National Monument and Preserve Wilderness Minimum Requirement Analysis: This section highlights the need to control invasive plants in Craters of the Moon wilderness study areas.

Appendix O: Relative Aquifer Vulnerability Evaluation (RAVE) Analysis: This method would be used by the parks to analyze potential impacts to groundwater quality.

Appendix P: Draft Impairment Analysis for the Northern Rocky Mountains Invasive Plant Management Plan Environmental Assessment Preferred Alternative: This newly required appendix analyzes the impacts of the preferred alternative and states why these would not cause impairment of park resources.

Appendix Q: Biological Assessment (Bull Trout) Grant-Kohrs Ranch National Historic Site: This provides analysis of potential impacts from Alternative on bull trout.

i. Executive Summary

1. Introduction

This Environmental Assessment (EA) describes the impacts associated with alternatives that consider whether to implement an Invasive Plant Management Plan for 10 parks located in the Northern Rocky Mountains and served by the Northern Rocky Mountains Exotic Plant Management Team (NRM-EPMT).

The National Park Service (NPS) intends to continue to manage nonnative invasive plants at 10 parks in the Northern Rocky Mountains, including at:

- City of Rocks National Reserve
- Craters of the Moon National Monument and Preserve
- Fossil Butte National Monument
- Golden Spike National Historic Site
- Grant-Kohrs Ranch National Historic Site
- Hagerman Fossil Beds National Monument
- Little Bighorn Battlefield National Monument
- Minidoka National Historic Site
- Nez Perce National Historical Park: Bear Paw Battlefield
- Nez Perce National Historical Park: Big Hole National Battlefield

The purpose of this plan is to reduce the adverse effects of nonnative invasive plants on native plant communities and other natural and cultural resources within the 10 parks. Vegetation in the 10 parks varies from high desert to sagebrush steppe, and includes wetland and riparian areas and remnant native prairie.

2. Problems Associated with Nonnative Invasive Species

Nonnative plants are species that occur outside of their native ranges as a result of direct or indirect human actions. A nonnative invasive species is "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health" (Executive Order 13112 1999). Nonnative plants replace native plant communities, degrade wildlife habitats, and reduce the biological diversity of ecosystems. According to the Ecological Society of America, invasive plants are responsible for the decline of 35-40 percent of threatened species. More than 2.6 million acres in the United States are infested with nonnative species.

In national parks, nonnative plants are impacting diversity and altering park settings. Over 6,500 nonnative invasive species have been documented in national parks; about 70 percent of these are plants. Together, approximately five percent of all national park lands are dominated by invasive plants.

The 10 small parks partnering in this plan have identified nonnative invasive plant management as one of their top natural resources management priorities. For example, at Craters of the Moon, rush skeletonweed and leafy spurge threaten benchmark plant communities, resources identified in the parks enabling proclamation. Failure to manage these nonnative invasive species to protect benchmark communities at Craters of the Moon could result in major adverse impacts. At Craters of the Moon and City of Rocks, the habitat for state listed and federally petitioned greater sage-grouse is degrading due to nonnative plant invasion. At Big Hole and Bear Paw intact and rare plants and communities are being threatened. Currently, Grant-Kohrs has over 625 acres of nonnative invasive species, including spotted knapweed, leafy spurge, and Canada thistle. Field bindweed, Canada thistle, and St. Johnswort are the most invasive weeds threatening Little Bighorn. Dyers woad is a major concern affecting the cultural landscape at Golden Spike. Diffuse knapweed, purple loosestrife, rush skeletonweed, and saltcedar are invading Hagerman Fossil Beds. Russian knapweed and yellow starthistle represent the greatest

nonnative invasive species threats at Minidoka. These infestations threaten the reservoir of biodiversity that make each of these parks unique.

3. Decision to be Made

If reviewers do not identify significant environmental impacts during the public review period for this EA, it will be used to prepare a Finding of No Significant Impact (FONSI).

4. Purpose of the Environmental Assessment

This EA describes the potential environmental impacts which could result from the two alternatives considered, including Alternative 1 (No Action: Continue Current Management). This EA has been prepared to satisfy the requirements of the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190, 42 U.S. C. 4321-4347, as amended), including the Council on Environmental Quality (CEQ) regulations found at 40 CFR 1500 -1508 and other applicable laws, *Management Policies* (NPS 2006), the NPS NEPA compliance guidance handbook (Director's Order (DO)-12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*) and management directives. This EA facilitates compliance with Section 106 of the National Historic Preservation Act, Section 7 of the Endangered Species Act, the Wilderness Act and other applicable laws enacted for the protection of the environment.

5. Alternatives

The alternatives are based on the purpose and need for the project and are consistent with existing laws, policy and planning documents, including general management plans (GMPs) which provide direction for actions taken in the parks.

The Northern Rocky Mountains Invasive Plant Management Plan is intended to provide parks with a suite of tools to effectively treat invasive plants. Resource managers can then select the most appropriate treatment option or combination of treatments to reduce the impacts from and threats to the park from invasive plants.

The following kinds of treatments are considered in this plan:

- Cultural: practices that reduce opportunities for invasive plants to occur and allow for the continued growth and spread of native plants. Examples include using clean fill in construction and seeding native species.
- Manual / Mechanical: practices that remove all or part of the invasive plant. Examples include hand-pulling, cutting, grubbing, haying and mowing.
- Biological: the practice of using the natural enemies of plants (such as insects and fungi) to control them. Examples include the use of plant feeding insects to control invasive plants. Biological control methods are used only when the agent is host-specific and has a negligible risk of becoming a pest itself. Insect biological control methods are approved by the Agricultural Plant Health Inspection Service (APHIS), an agency within the U.S. Department of Agriculture (USDA).
- Chemical: the practice of applying herbicides according to their approved label uses. Examples of application methods include backpack spraying, spot treatment (stump painting) and aerial application using fixed wing aircraft or helicopters. Pesticide use is approved by NPS regional and/or national coordinators.
- Prescribed Fire, including Flaming: the practice of using fire in certain areas under specific conditions to reduce the growth of invasive plants. The use of prescribed fire must also be identified in approved park Fire Management Plans.

Alternative 1: Depending on the park, resource managers would continue to implement some or all of the components of an invasive plant management program. Ongoing activities, using existing methods, would continue.

Alternative 2: Resource managers would identify high priority invasive species for treatment; determine what treatments are feasible to reduce the number or population of plants; identify the most reasonable

management strategy or strategies; and then select the most appropriate treatment option. A combination of treatments may also be identified. Treatments would minimize potential impacts and maximize overall management success using systematic, documented and comprehensive methods and analysis.

6. Alternatives Considered But Dismissed

The following additional alternatives were considered during the planning phase but were dismissed because they met one of the CEQ criteria for dismissal (see Chapter III).

- Cease Treatment of Nonnative Plants
- Treat Only High Priority Species
- Treat All Nonnative Plants
- Consider All Treatments except Chemical Control
- Consider All Treatments except Biological Controls

7. Environmentally Preferred Alternative

The environmentally preferred alternative is Alternative 2 (see reasoning in Chapter III).

8. Summary of Public Comments Received During Scoping

The 10 partner parks conducted internal scoping from December 2007, when this project originated until this document was published. A variety of comments were received from park, regional and other staff regarding what should be in the plan and what impacts should be included.

Comments addressed information the EA should include, the need for prevention and early detection techniques; the need to determine priority species for treatment and what methods were most effective; the need to include a wide array of treatment methods; the need to use non-chemical means to control plants where possible, to identify specific criteria for herbicide use, and to minimize effects outside the treatment area; the need to identify beneficial, adverse and cumulative impacts as well as impacts on water and sage grouse; the need to include education as a component of the plan; the need to include monitoring as part of the plan; and the need to incorporate safety measures to protect visitors and employees. Comments also noted that the plan should allow for the use of new treatment techniques (such as more effective herbicides and biological controls) and that the plan should also focus on developing partnerships, such as cooperative weed management areas (CWMAs).

9. Impacts of the Alternatives

An impact comparison chart is provided as Table 38 in Chapter V.

10. Consultation and Coordination

During preparation of this plan, the 10 partner parks consulted with other federal and state agencies, counties, Native American Indian tribes and the general public. Results of that consultation can be found in Chapter III and Chapter VI.

11. How to Comment on this Environmental Assessment

If you wish to comment on the EA, you may post comments online at the NPS park planning (PEPC) website: http://parkplanning.nps.gov/gosp (PEPC project number 20520), or email comments to: crmo_information@nps.gov. Written comments may also be sent to any of the parks involved in this plan (see Park Addresses above). See also the section within Chapter II: *Purpose and Need* entitled "How to Comment on this Environmental Assessment."

This EA will be available for public review for 45 days. The NPS practice is to make comments, including names, home addresses, home phone numbers, and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and/or home addresses, etc., by stating this prominently at the beginning of their comments. In addition, commenters must present a rationale for withholding this information. This rationale must demonstrate that disclosure would

constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. The NPS will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives of or officials of organizations or businesses, available for public inspection in their entirety.

Copies of the document may be obtained from the nearest park site or may be downloaded from the NPS park planning (PEPC) website: http://parkplanning.nps.gov/gosp.

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