National Park Service
U.S. Department of the Interior

Rocky Mountain National Park
Colorado

FINDING OF NO SIGNIFICANT IMPACT
EXOTIC PLANT MANAGEMENT PLAN

Recommended:

Darla Sidles — 2.11.19

Darla Sidles
Superintendent, Rocky Mountain National Park

Date

Approved:

Kate Hammond — 2-15-2019

Kate Hammond
Acting Regional Director, Intermountain Region, National Park Service

Date

INTRODUCTION

In compliance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) prepared an Environmental Assessment (EA) to examine alternative actions and environmental impacts associated with the proposed Exotic Plant Management Plan for Rocky Mountain National Park (park). The project is needed to address deficiencies in the 2003 Invasive Exotic Plant Management Plan (2003 plan), which has been ineffective in controlling invasive exotic plant infestations in the park.

The statements and conclusions reached in this finding of no significant impact (FONSI) are based on documentation and analysis provided in the EA and associated decision file. To the extent necessary, relevant sections of the EA are incorporated by reference below.

SELECTED ALTERNATIVE AND RATIONALE FOR THE DECISION

Based on the analysis presented in the EA, the NPS selected Alternative B – Adaptive Integrated Pest Management (the selected alternative).

The selected alternative will improve management of invasive exotic plants in the park by allowing the park to use the most effective available control methods. The park will adopt a parkwide adaptive integrated pest management (IPM) decision-making framework that incorporates the best available science, expert knowledge, site assessment, and monitoring. This information will be used to determine the extent of exotic species infestations, prioritize treatments, and determine the most effective treatment methods and other management actions. Management actions will be prioritized based on the level of threat to park resources, the size and extent of species infestations, and the park's ability to control those infestations. Park natural resource managers will use a structured decision-making process to assist in setting invasive exotic plant management priorities and assist in determining control methods for invasive exotic plants. Park staff will have the flexibility to manage invasive exotic plant species listed in the 2003 plan, species listed on the Colorado noxious weed list, and any additional invasive exotic plant species that become a threat to park resources in the future. These control methods could be used separately or in combination with one another, depending upon which species are targeted for management. Components of the proposed action will include inventory, monitoring, and invasive exotic plant management tools such as manual control, mechanical control, and cultural practices.

Rationale

Alternative B was selected because it best meets the project purpose to:

- Protect and restore native species, ecosystems, and the visitor experience from the detrimental effects of exotic plant invasion.
- Protect cultural resources.

MITIGATION MEASURES

The selected alternative incorporates the mitigation measures listed in Appendix A of this FONSI.

PUBLIC INVOLVEMENT/AGENCY CONSULTATION

Initial public scoping for the project occurred from October 26, 2016 through December 1, 2016, and the NPS hosted public scoping meetings on November 7, November 14, and November 17, 2016. The EA was made available for public review and comment during a 30-day period from November 7, 2018 through December 6, 2018, and the NPS hosted a public meeting on November 15, 2018. The NPS received 11 separate public correspondences. Most comments supported the selected alternative. One substantive comment focused on biological controls and is addressed in the responses to public comments (Appendix C).

Ground-disturbing invasive exotic plant management activities such as manual, mechanical, and cultural control and prescribed fire have the potential to cause direct and indirect effects on archeological resources and historic structures, buildings, districts, and cultural landscapes. The park and the Colorado State Historic Preservation Officer (SHPO) have entered into a park-specific 2019 Exotic Plant Management Plan (EPMP) Programmatic Agreement (PA) regarding exotic plant management in the park (Appendix D). No adverse effects are anticipated when the park adheres to the 2019 EPMP PA, Section 106 of the National Historic Preservation Act (NHPA), and the mitigation measures listed in Appendix A of the FONSI.

The EA was sent to American Indian tribes traditionally affiliated with the lands of the park in November 2018 to request the tribes' review and comment. Two tribes sent responses. The Northern Cheyenne expressed no objections to the EA and wanted to be kept informed of future exotic plant actions. The Southern Ute supported Alternative B and requested additional information on impacts on properties of religious and cultural importance.

In a biological assessment (BA) submitted to the U.S. Fish and Wildlife Service (USFWS) on June 8, 2018, the park determined that the selected alternative may affect, but is not likely to adversely affect, the greenback cutthroat trout, Mexican spotted owl, and Arapahoe snowfly. The park also determined that the selected alternative will have no effect on Canada lynx and will not jeopardize the continued existence of the North American wolverine. The USFWS concurred with the park's findings on September 17, 2018.

FINDING OF NO SIGNIFICANT IMPACT

Council on Environmental Quality regulations in 40 Code of Federal Regulations (CFR) 1508.27 identify 10 criteria for determining whether a selected action will have a significant effect on the human environment. The NPS reviewed each of these criteria given the environmental impacts described in the EA and determined there will be no significant direct, indirect, or cumulative impacts on the human environment under any of the criteria.

As described in the EA, the selected alternative has the potential for adverse impacts on vegetation; terrestrial wildlife, including special status species; fish and special status aquatic species; wilderness; and visitor use and experience. However, no potential for significant adverse impacts was identified.

Exotic plant treatments will result in short-term impacts on individual plants or small populations of native plants typically lasting about one growing season. However, allowing an adaptive IPM approach to managing exotic vegetation will benefit native plant communities by enabling a rapid response to invasive exotic plant species using IPM tools. This rapid response will treat

infestations at the smallest possible size and allow park staff to respond to new-to-the-park invasive exotic plant species in a proactive manner. The selected alternative will allow the eradication of exotic plant species that are currently not treated until populations have reached a certain threshold. By allowing use of additional herbicides and including an adaptive IPM component, the selected alternative will preserve ecological diversity. In areas with particularly dense infestations of invasive exotic plants, eliminating or reducing the density of exotic plants will allow native vegetation to flourish. Using the most effective treatments would lead to reduced exotic vegetation management over the long term as populations of invasive exotic plants are eliminated or brought under control. Overall, maintaining native plant communities in a healthy dynamic condition will favor native plants over invasive exotic plants, resulting in long-term benefits to native vegetation. This is an important benefit because the park's mission includes preserving the park's high-elevation ecosystems. These benefits will persist indefinitely, as long as the selected alternative continues to be implemented by the park.

General impacts on wildlife will include disturbance from human activity and noise typically occurring for less than a week and less than 10 hours each day. Because invasive exotic plants can displace the native plant communities that terrestrial wildlife and special status species depend upon for habitat, the selected alternative will benefit wildlife. Effectively controlling and reducing infestations of invasive exotic plants will improve wildlife habitat in the park over the long term and will better preserve ecological diversity compared with current practices. This will support the park's purpose, which includes preserving high-elevation ecosystems and wildlife. These benefits will persist as long as the selected alternative continues to be implemented.

The benefits to the park's fish and special status aquatic species and habitat outweigh the slight risk of exotic plant treatments including herbicide exposure. The elimination of invasive exotic plant species and reestablishment of native plants will result in beneficial effects on riparian habitat, which supports fish and special status aquatic species. This will be an important benefit because aquatic communities make up a relatively small portion of the park, provide habitat for a disproportionate number of species, and are relatively fragile and vulnerable to disturbance. These benefits will occur over the long term and will persist as long as populations of invasive exotic plant species are controlled and prevented from increasing.

Park survey and treatment teams will have direct effects on wilderness character. Treatment of invasive exotic plants within wilderness will have impacts on the untrammeled, natural, and undeveloped qualities of wilderness, as well as opportunities for solitude. Use of field crews and mechanized equipment will generally be limited to a few hours or days at any one location and will cease after crews leave the area. Rapid response will control infestations at the smallest possible size. Managing invasive exotic vegetation in wilderness will have beneficial impacts on wilderness character by improving naturalness, scientific and educational values, and the experiential aspect of wilderness recreation by maintaining, promoting, and protecting ecosystem health. These benefits will be important because the potential degradation of wilderness qualities under the no action alternative will be avoided. Beneficial effects on wilderness will persist indefinitely as long as the selected alternative is implemented.

Use of teams for survey and treatment will have direct effects on visitor use and experience from the presence of crews (resulting in both noise and visual impacts) and potential closures associated with treatment and revegetation. However, maintaining ecosystem health by managing invasive exotic plants will enhance visitor use and experience by improving and preserving opportunities for visitors to observe wildlife, enjoy scenic views, and view native wildflowers while ensuring that future generations can enjoy these activities. These benefits are

difficult to quantify and will persist as long as effective management of exotic plant species continues to be implemented.

There will be no significant impacts on public health, public safety, or unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the NPS selected alternative will not violate any federal, state, or local environmental protection law.

CONCLUSION

As described above, the selected alternative does not constitute an action meeting the criteria that normally requires preparation of an environmental impact statement (EIS). The selected alternative will not have a significant effect on the human environment in accordance with Section 102(2)(c) of NEPA.

Based on the foregoing, it has been determined that an EIS is not required for this project and, thus, will not be prepared.

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Appendix A
Mitigation Measures

General Protection Measures

- The park will ensure that all herbicide applicators can identify federally listed plant and animal species in the area.

- Park natural resource management staff will assess all herbicide-treated areas for revegetation needs. Vegetation will be reestablished on bare ground to minimize the opportunity for invasive exotic plant reestablishment, unless the patch is small enough that natural revegetation will occur from adjacent undisturbed native vegetation.

- Any invasive exotic plant control activities that could impact this species will be avoided. Herbicide use will follow label instructions, which include protecting waters by not using herbicides in standing or flowing water. In addition, applicators will ensure that no airborne drift gets into waterways or lakes.

Wilderness Protection Measures

- Park natural resource managers will conduct a desktop analysis and on-site field surveys prior to treatment to identify those exotic plant projects proposed to occur in wilderness. Resource managers will prepare a programmatic Wilderness Minimum Requirements Decision Guide (MRDG) that analyzes the proposed activities in this EA that are generally prohibited under the Wilderness Act or that are otherwise likely to impact overall wilderness character. The park's Exotic Plant Annual Work Plan will include a tiered Wilderness Minimum Requirement Analysis for the specific actions proposed each year, if necessary.

- The use of management activities generally prohibited by the Wilderness Act such as the use of motorized and mechanized vehicles and equipment, and monitoring installations will be limited to the minimum required to preserve wilderness character. Exotic plant management activities will balance the restoration of the natural quality of wilderness with the impacts of this management activity on the untrammeled quality of wilderness.

Cultural Resource Protection Measures

As outlined in the 2019 EPMP PA (Appendix D), stipulations for cultural resources include:

- A qualified individual and/or team that meets the Secretary of the Interior's Historic Preservation Professional Qualification Standards will perform or oversee implementation of the 2019 EPMP PA, and any inventory, documentation, or treatment of potential or known historic properties shall conform to the provisions of the Secretary of the Interior's Standards and Guidelines for Identification, Documentation, and Treatment of Historic Properties and NPS Director's Order 28 (Cultural Resources).

- Each year, the park superintendent will notify consulting tribes in writing and with associated map locations about areas proposed for activities under the 2019 EPMP PA.

Tribes will be provided advanced notice of activities with 30 days to reply to the NPS verbally or in writing about any concerns. If no concerns are expressed within 30 days, park staff may proceed with implementation of proposed PA activities, taking into consideration other interested parties, protection measures, standard operating procedures, and best management practices needed to protect historic properties in collaboration with the park Section 106 coordinator.

- The park Section 106 coordinator, in coordination with the park's cultural resource management team, will determine if the 2019 EPMP PA streamlined criteria are met for a proposed exotic plant management treatment undertaking. All undertakings that do not qualify for the streamline review as described in the PA will be reviewed in accordance with 36 CFR Part 800.

- For situations when historic properties may be discovered or unanticipated effects on historic properties are found during implementation of any activity associated with the 2019 EPMP PA, all exotic plant control activities in the immediate area of the discovery or unanticipated effects will stop, and the area will be secured from further disturbance.

- Park staff shall ensure that any American Indian burials or American Indian human remains, funerary objects, sacred objects, and objects of cultural patrimony discovered during implementation of any activity under the 2019 EPMP PA or part of any activity associated with the PA are treated with appropriate respect and according to federal law including, but not limited to, the Native American Graves Protection and Repatriation Act (NAGPRA) and its implementing regulations (36 CFR Part 10). Actions described herein do not constitute compliance with provisions of NAGPRA.

- Prior to the beginning of the field season, the park cultural resource specialist will provide a cultural resource awareness training to field staff to include a basic identification of prehistoric and historic archeological resources that may be encountered.

Health, Safety, and Herbicide Application

- By April 30 of each year, park personnel will identify locations in the park where herbicide application is warranted. This information will be made available to the public on the park's website, through the park's information office, and may be available using other sources. Herbicide treatment will not be done outside of the identified locations except in the cases of early detection and rapid response of newly discovered populations or species. In these rare cases, these sites will be added to the website at least two weeks prior to treatment.

- All sites where herbicides are proposed to be applied will be posted at access points with signs at least two weeks prior to application. Signs will remain in place for at least as long as is required by the herbicide label. Signs will contain the treatment date, target invasive exotic plants, name of herbicide applied, restricted entry period if any, and a park contact name and number for any questions.

- Job hazard analysis will occur for invasive exotic plant work. Park staff will ensure all employees and volunteers are given proper personnel protective equipment and safety instructions for all treatment methods.

- NPS personnel applying herbicides will transport only the estimated quantity needed for that day's work in a manner as to prevent tipping or spilling, and in a compartment that is isolated from food, clothing, and safety equipment.

General Wildlife

- Work will not be conducted near active nests of bald and golden eagles or peregrine falcons during the breeding and nesting season from March through July. Work will also avoid take relating to any bird protected by the Migratory Bird Treaty Act. Park staff will consult with the park's wildlife technician, GIS specialist, or staff ecologist for known raptor and songbird nest locations.

- Treatment will be avoided in sensitive wildlife habitat during lambing, calving, or denning periods. This generally occurs between May 1 to mid-June for low-elevation areas and from May 1 to August 31 for high-elevation areas.

Canada Lynx

- All project activities will adhere to all relevant conservation measures outlined in the Lynx Conservation Assessment and Strategy (Interagency Lynx Biology Team (ILBT) 2013).

Wolverine

- If a wolverine or evidence of wolverine is observed, work in the area will cease until surveys are conducted to verify presence and potential denning areas. If confirmed, work will be avoided during the critical breeding and denning timeframe and, in future years, surveys will occur prior to work. If surveys detect a wolverine near target treatment areas, the park will consult with the USFWS on proposed actions and seek guidance before proceeding with treatments.

- Herbicide application will specifically avoid spraying carcasses or in the immediate vicinity of carcasses.

Mexican Spotted Owl

- No Mexican spotted owl (MSO) or nesting habitat has been documented in the park, but MSO have the potential to expand into the park. The park is working continuously with the USFWS to refine the definition of potential nesting habitat based on observed nesting of MSO in Colorado. Work will be avoided in potential MSO nesting habitat and the adjacent area to buffer impacts of noise-producing equipment for applications during the critical breeding and nesting timeframe from March 1 through August 31. If this timeframe cannot be avoided, surveys for MSO in these treatment areas will take place and treatment may proceed if no MSO are present.

- Prior to spraying, maps of potential MSO habitat will be provided to staff and contractors.

- If surveys detect a MSO near target treatment areas, the park will consult with the USFWS before proceeding with treatments. If nests are identified but not active, the park will consult with the USFWS on proposed actions and guidance on whether work can proceed.

Greenback Cutthroat Trout

- Only herbicides that are practically nontoxic to fish and other aquatic organisms will be used within the water influence zone (see Table 2 of the BA).

- If fish mortality or distressed and unusual behavior is observed, spraying will cease and the park will consult with the USFWS.

- NPS or USFWS wildlife biologists will conduct site reviews during peak spawning and reproduction periods. The most critical time for greenback cutthroat trout is spawning through hatching based on when most offspring are lost in hatchery settings. Greenback cutthroat trout spawn in the spring. The timing of spawning is driven by temperature with the onset of spawning occurring once mean daily water temperature remains above 5 degrees C throughout an entire week. In the park, the onset of spawning ranges from mid-May to mid-July. Eggs hatch in approximately 1.5 months, and the timing to hatch was consistent between the earliest and latest spawning sites. Based on these data, the critical timeframe to avoid spraying near greenback cutthroat streams or lakes is May 15 through August 31.

Arapahoe Snowfly

- NPS or USFWS wildlife biologists will conduct site reviews before the park conducts invasive exotic plant management activities in areas adjacent to Arapahoe snowfly habitat. Any invasive exotic plant control activities that could impact this species will be avoided.

- To reduce the risk of take, manual, mechanical, and chemical control activities in Arapahoe snowfly suitable habitat will take place only during summer months, when this species is inactive.

- Only herbicides that are practically nontoxic to aquatic invertebrates will be used within the water-influence zone in potential Arapahoe snowfly habitat to reduce the risk that nymphs or adults will be exposed to herbicide residue on water, soil, or detritus.

Appendix B
Non-Impairment Determination

By enacting the NPS Organic Act of 1916 (Organic Act), Congress directed the U.S. Department of the Interior and the NPS to manage units "to conserve the scenery, natural and historic objects, and wildlife in the System units and to provide for the enjoyment of the scenery, natural and historic objects, and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (54 United States Code 100101). NPS *Management Policies 2006*, Section 1.4.4, explains the prohibition on impairment of park resources and values:

> While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

An action constitutes impairment when its impacts "harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of those resources or values" (NPS 2006, Section 1.4.5). To determine impairment, the NPS must evaluate the:

> particular resources and values 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 constitute impairment, but an impact will be more likely to constitute an 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; or
> - identified in the park's general management plan or other relevant NPS planning documents as being of significance (NPS 2006, Section 1.4.5).

Fundamental resources and values for the park are identified in the enabling legislation for the park, as well as the park's foundation document (2013) and Master Plan (1976). Based on a review of these documents, the fundamental resources and values for the park are as follows:

1. The park provides exceptional access to wild places for visitors to recreate and experience solitude and outstanding scenic beauty. Trail Ridge Road, the highest continuous paved road in the United States, and the extensive trail system bring visitors to the doorstep of a variety of wilderness-based recreational opportunities.

2. Fragile alpine tundra encompasses one-third of the park, one of the largest examples of alpine tundra ecosystems protected in the contiguous United States.
3. Glaciers and flowing fresh water carved the landscapes of the park. The park is the source of several river systems, including the Colorado River and the Cache la Poudre River, Colorado's first and only designated wild and scenic river.
4. The dramatic elevation range within the park boundary, which spans from 7,600 feet to 14,259 feet and straddles the Continental Divide, allows for diverse terrestrial and aquatic ecosystems, varied plant and animal communities and a variety of ecological processes. The park is designated as a United Nations Educational, Scientific and Cultural Organization (UNESCO) international biosphere reserve and globally important bird area, with portions of the park's montane, subalpine, and alpine ecosystems managed as research natural areas for scientific and educational purposes.
5. The mountainous landscape of the park has drawn people to the area for thousands of years. Visitors can see remnants of the different ways people have used this land over time, ranging from prehistoric big game drives to dude ranching to recreational tourism.

This non-impairment determination has been prepared for the selected alternative, as described in the FONSI. While analyzed in detail in the EA, non-impairment determinations are not necessary for visitor use and experience because impairment findings relate to park resources and values. Visitor use and experience are not generally considered park resources or values according to the Organic Act. Topics evaluated for impairment include vegetation, including special status species; terrestrial wildlife, including special status species; fish and special status aquatic species; and wilderness.

VEGETATION, INCLUDING SPECIAL STATUS SPECIES

Approximately 1,000 vascular plant species are known in the park. Native vegetation within the project area is described on pages 21 and 22 of the EA. No federally listed plant species occur in the project area; however, two species – Ute ladies'-tresses orchid (*Spiranthes diluvialis*) and Colorado butterfly plant (*Gaura neomexicana* spp. *coloradensis*) – occur in riparian habitats downstream of the park in lower elevation areas. Several special status plant species listed as imperiled or vulnerable by the State of Colorado and the Colorado Natural Heritage Program (CNHP) are known or suspected to occur in the park and are listed in Appendix D of the EA.

The selected alternative will use a full range of exotic plant management tools—including manual control, mechanical control, herbicide application, cultural practices (including fire and native habitat restoration), early detection, and monitoring to manage invasive exotic plants. Ground disturbance and inadvertent trampling or loss of native plants will likely result from tools used to control exotic plants, including manual and mechanical control, cultural practices, and herbicide application. Only individual plants or small populations of native species will be impacted, and these impacts are not expected to persist beyond one growing season. The selected alternative will ultimately enhance native plant communities and prevent future soil erosion by restoring disturbed areas to natural conditions. In addition, the selected alternative will reduce competition for special status species by successfully controlling invasive exotic plant populations. Over the long term, maintaining native plant communities in a healthy dynamic condition will favor native plants over invasive exotic plants, reduce the need for exotic vegetation treatments, and preserve the park's high-elevation ecosystems.

The selected alternative will not result in an impairment of vegetation, including special status species, because controlling invasive exotic plants and restoring disturbed areas to natural conditions will enhance native plant communities in the park, prevent soil erosion, and reduce competition for special status plant species.

TERRESTRIAL WILDLIFE, INCLUDING SPECIAL STATUS SPECIES

Wildlife found in the park includes 52 mammal species, 276 bird species, 4 amphibian species, 2 reptile species, and 11 fish species. The distribution of wildlife species within the park varies by season, elevation, and types of habitats. The Canada lynx, North American wolverine, and Mexican spotted owl are the only federally listed terrestrial species with the potential to occur in the park. In addition, 49 special status wildlife species, including 2 amphibians, 2 reptiles, 41 birds, 3 mammals, and 5 terrestrial invertebrates, are known or have the potential to occur in the park either occasionally or year-round. Terrestrial wildlife within the park, including special status species, are described on pages 26–30 of the EA. A complete list of wildlife, including special status species, potentially occurring in the park is in Appendix D of the EA.

The selected alternative could result in disturbance and temporary displacement of terrestrial wildlife species from increased human activity or noise related to exotic plant control activities, specifically manual and mechanical controls. Many species of small mammals are nocturnal and will likely not be affected by increased human activity or noise resulting from treatments. Any impact on wildlife movements will be seasonal and limited to times when crews are present and control activities are occurring, which will encompass less than a week and less than 10 hours each day in any one area. Potential effects of herbicide application on habitat for large herbivores, birds, amphibians, and reptiles will be reduced by using spot herbicide applications on small populations of invasive exotic plants. Additionally, herbicide application will be avoided near nests of bald and golden eagles or peregrine falcons during the breeding and nesting season from March through July, or in sensitive wildlife habitat during lambing, calving, or denning periods as described in Appendix B of the EA.

The selected alternative will benefit native vegetation overall by reducing competition with invasive exotic plants, which will improve wildlife habitat and support ecological diversity in the park. The selected alternative will support the park's purpose, which includes preserving high-elevation ecosystems and wildlife. The removal of invasive exotic plants and restoration of native vegetation will likely result in long-term improvement of lynx, wolverine, and Mexican spotted owl habitat, including habitat for prey species. The selected alternative will have no effect on lynx; may affect, but is not likely to adversely affect, the Mexican spotted owl; and will not jeopardize the continued existence of the wolverine.

The selected alternative will not result in an impairment of terrestrial wildlife, including special status species, because effectively controlling and reducing infestations of invasive exotic plants will improve wildlife habitat in the park over the long term and will better preserve ecological diversity. Also, any disturbance to wildlife species or impacts on terrestrial wildlife habitat from exotic plant management treatments will be small because these actions will be localized and selective.

FISH AND SPECIAL STATUS AQUATIC SPECIES

Several native fish species occur in the park, including the federally threatened greenback cutthroat trout (*Oncorhynchus clarki stomias*) and the Colorado River cutthroat trout

(*Oncorhynchus clarki pleuriticus*), a state species of concern. Four exotic trout species occur in the park as well. Additionally, aquatic habitats in the park provide habitat for numerous aquatic invertebrates, including one mollusk considered vulnerable or imperiled by the CNHP and one insect species, the Arapahoe snowfly (*Capnia arapahoe*), which is a candidate for listing as threatened or endangered under the Endangered Species Act. Fish and special status aquatic species found in the park are described on page 34 of the EA.

The selected alternative would only use herbicides that are practically non-toxic for fish or for aquatic invertebrates in the water influence zone. Accidental exposure resulting from direct application of herbicides during treatment or indirect application by aerial drift will be reduced by implementing the mitigation/conservation measures described in Appendix B of the EA, including enforcing a water influence zone around streams, lakes, and ponds. No broadcast application will be used in areas where surface water is present. Only herbicides that are practically nontoxic to fish and other aquatic organisms will be used within the water influence zone when application near surface water is necessary. Additionally, no spraying will occur near greenback cutthroat trout streams or lakes during peak spawning and reproductive periods, and spraying in terrestrial Arapahoe snowfly habitat will take place in the summer months when they are not active.

The selected alternative will benefit fish and special status species by enhancing riparian habitat through the control of invasive exotic plant species and reestablishment of native plants. The selected alternative will not result in an impairment of fish and special status aquatic species because implementing mitigation/conservation measures, such as water influence zones, will reduce the risk of exposure to herbicides through runoff and drift. Also, the elimination of invasive exotic plant species and reestablishment of native plants will enhance riparian habitat, which supports fish and special status aquatic species.

WILDERNESS

Wilderness areas cover about 252,085 acres, or 95% of the park. In addition, about 62% of the park boundary is adjacent to national forest, of which 70% is designated wilderness.

Treatment of invasive exotic plants within wilderness will impact the untrammeled, natural, and undeveloped qualities of wilderness, as well as opportunities for solitude from the presence of field crews, potential use of mechanized equipment, and the potential for closures in specific areas. Use of field crews and mechanized equipment will generally be limited to a few hours or days at any one location and will cease after crews leave the area. Also, the use of management activities generally prohibited by the Wilderness Act, such as the use of motorized and mechanized vehicles and equipment and monitoring installations, will be limited to the minimum required to preserve wilderness character.

Prescribed fire could be used to maintain healthy native plant communities in some habitat types in wilderness. Prescribed fire will have a negative impact on the natural and untrammeled qualities of wilderness character in localized areas of the park for a few hours or days as prescribed fires burn but will ultimately enhance the natural quality of wilderness when plant and animal communities and the ecological balance are restored.

The selected alternative will benefit the natural quality of wilderness character over the long term by reducing the abundance of exotic plants in the park and restoring disturbed areas to natural conditions, which prevents soil erosion and enhances native plant communities. The

selected alternative will also benefit the untrammeled and undeveloped qualities of wilderness, as well as opportunities for solitude by reducing the number of staff and volunteer hours spent removing vegetation by hand.

The selected alternative will adversely affect wilderness qualities (untrammeled, natural, undeveloped, and opportunities for solitude) by manipulating and imposing human controls on vegetation communities. However, the park prepared a programmatic wilderness MRDG that will be used to identify, analyze, and select appropriate management actions while avoiding and minimizing impacts on wilderness character. Overall, the selected alternative will benefit the natural, undeveloped, and untrammeled qualities of wilderness character, as well as opportunities for solitude, by restoring disturbed areas to natural conditions and reducing the need for exotic vegetation treatments through educational, preventive, and collaborative actions. Thus, the selected alternative will not impair designated wilderness.

CONCLUSION

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the superintendent's professional judgment that there will be no impairment of park resources and values from implementation of the selected alternative. The NPS has determined that implementation of the selected alternative will not constitute an impairment of the resources or values of Rocky Mountain National Park. This conclusion is based on consideration of the park's purpose and significance, a thorough analysis of the environmental impacts described in the EA, comments provided by the public and others, and the professional judgment of the decision maker guided by the direction of NPS Management Policies 2006.

REFERENCES

National Park Service (NPS). 2006. NPS Management Policies 2006. https://www.nps.gov/policy/mp2006.pdf.

Appendix C
Responses to Public Comments

The EA was made available for public review, and comments were accepted by the park from November 7, 2018 through December 6, 2018. A public meeting was held in Estes Park on November 15, 2018 to present the results of the EA and answer questions.

During the public comment period, the NPS received 11 correspondences through the NPS's Planning Environment and Public Comment (PEPC) system.

Responses to public comments address substantive comments that were received during the public review period. According to NPS policy, substantive comments are those that (1) question the accuracy of the information in the EA, (2) question the adequacy of the environmental analysis, (3) present reasonable alternatives that were not presented in the EA, or (4) cause changes or revisions in the proposal.

Many comments addressed issues already adequately covered in the EA. No comments warranted development of an additional alternative or reconsideration of alternatives that were considered but dismissed. Therefore, the alternatives remain as described in the EA, and no changes were made in the assessment of environmental consequences.

The park responded to one substantive public comment. The comment and the response are provided below.

Comment: A commenter had a concern, regarding the elimination of biological control use in the preferred alternative as an invasive plant control method that is currently allowed under the 2003 plan. The EA states in part: 'In the future, biological controls may be used once they have been successfully tested in other areas and in coordination with neighboring and collaborating agencies or entities such as Larimer and Boulder Counties, U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service, and universities.' The commenter requests that the rationale behind the discrepancy be clarified.

Response: Thank you for commenting on the Rocky Mountain National Park Exotic Plant Management Plan and Environmental Assessment. We agree that it is important to utilize a wide range of tools that would be feasible and effective in managing exotic plant species. The 2018 plan states that biological controls would not be considered as a primary technique for exotic plant management; however, the plan did address future use of biological controls once successful testing has been completed in other areas. If the National Park Service finds biological control agents suitable for controlling exotic invasive plants, the Park would conduct NEPA review and consultation with other agencies, as needed, before proceeding.

Appendix D
Programmatic Agreement

PROGRAMMATIC AGREEMENT

AMONG

THE NATIONAL PARK SERVICE AT ROCKY MOUNTAIN NATIONAL PARK AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER REGARDING EXOTIC PLANT MANAGEMENT IN ROCKY MOUNTAIN NATIONAL PARK

WHEREAS, Rocky Mountain National Park (ROMO or park), located in Larimer, Boulder, and Grand Counties, Colorado, intends to implement an Invasive Plant Management Plan (Plan) to protect ROMO's natural and cultural resources from the impacts of nonnative invasive plants; and

WHEREAS, the National Park Service (NPS) has prepared an Environmental Assessment in compliance with the National Environmental Policy Act (NEPA) to evaluate the potential impacts of the Plan on the natural and human environment; and

WHEREAS, the Plan provides the framework to implement decisions to mitigate against the continued spread of nonnative invasive plant species and treat existing infestations through adaptive management; and

WHEREAS, implementation of the Plan will result in undertakings that have the potential to affect historic properties; and

WHEREAS, Section 106 and its implementing regulations 36 CFR Part 800 as amended requires federal agencies to take into account the effect of an undertaking on historic properties as defined by 36 CFR 800.16(1)(1); and

WHEREAS, the NPS intends to coordinate its compliance with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. 306108) with the applicable requirements of the National Environmental Policy Act (NEPA (42 U.S.C. 4321-4347) pursuant to 40 CFR 1500-1508; and

WHEREAS, the NPS intends to apply this Programmatic Agreement (PA) regardless of whether the No Action or Action Alternative is selected as result of the NEPA process; and

WHEREAS, the NPS has defined the undertaking's area of potential effect (APE) as comprising all current lands administered by the NPS within the boundary of ROMO; and

WHEREAS, the NPS has determined that the effects on historic properties cannot be fully evaluated prior to the approval of the undertaking, and has developed this PA to establish a process for complying with Section 106 of the NHPA in accordance with 36 CFR 800.14(b); and

WHEREAS, this PA supplements the 2008 *Programmatic Agreement Among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act* (2008 Nationwide PA); and

WHEREAS, the NPS has consulted with the Arapaho Tribe of the Wind River Reservation, Wyoming; Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana;

Cheyenne and Arapaho Tribes, Oklahoma; Comanche Nation, Oklahoma; Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana; Shoshone Tribe of the Wind River Reservation, Wyoming; Southern Ute Indian Tribe of the Southern Ute Reservation, Colorado; Ute Indian Tribe of the Uintah and Ouray Reservation, Utah; and Ute Mountain Tribe of the Ute Mountain Reservation, Colorado, New Mexico, and Utah participated and each have been invited to sign this PA as concurring parties; and

WHEREAS, the NPS has consulted Grand Lake Area Historical Society; Larimer, Grand, and Boulder Counties; and the Town of Estes Park and each have been invited to sign this PA as concurring parties; and

WHEREAS, the NPS has consulted with the Colorado State Historic Preservation Officer (SHPO) pursuant to 36 CFR 800.14(b); and

WHEREAS, in accordance with 36 CFR 800.6(a)(1), the NPS has notified the Advisory Council on Historic Preservation (ACHP) of the development of a PA, and the ACHP has chosen not to participate in the consultation pursuant to 36 CFR 800.6(a)(1)(iii); and

NOW, THEREFORE, the NPS and SHPO agree that the Invasive Plant Management Plan and subsequent projects shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

The NPS shall ensure that the following stipulations are met and carried out:

I. PROFESSIONAL QUALIFICATIONS AND STANDARDS

A. All work performed under this PA will be performed or supervised by qualified individuals and/or teams that meet the *Secretary of the Interior's Historic Preservation Professional Qualification Standards* (Appendix 1).

B. Any inventory, documentation or treatment of potential or known historic properties pursuant to implementation of this PA shall conform to the provisions of the *Secretary of the Interior's Standards and Guidelines for Identification, Documentation, and Treatment of Historic Properties,* and NPS Director's Order 28 (Cultural Resources).

C. The 2008 Nationwide PA requires that the Superintendents of all NPS units have a designated Section 106 Coordinator and CRM Team with the qualifications and training needed to effectively carry out the responsibilities of the positions. The CRM Team provides expertise and technical advice to the Superintendent and ROMO Section 106 Coordinator for the purposes of Section 106 compliance.

II. PROJECT PLANNING AND IDENTIFICATION OF HISTORIC PROPERTIES

A. ROMO will identify proposed invasive plant management activities to be conducted within a one year period of time with an annual work plan, early enough in the planning process so that notifications can be made to concurring parties and signatories to comment on the work plan and to allow for their identification of culturally significant resources.

B. The Section 106 Coordinator will prepare a cultural resources assessment for review and approval by ROMO's Cultural Resource Management (CRM) Team. One assessment will be prepared for all anticipated undertakings under the plan for the upcoming year.

The Cultural Resources Assessment will:

1. Evaluate whether invasive plant management activities have the potential to cause direct, indirect and cumulative effects on historic properties and whether the activity(ies) qualify for streamlined review (defined in section IV.B of this PA and Appendix 2). If the activity(ies) do not meet the criteria for Streamlined Review, consultation will follow the Standard Review Process outlined in Section V of this PA;
2. Define the APE, taking into account direct, indirect and cumulative effects on historic properties;
3. Identify potential historic properties within the APE by consulting with the ROMO Section 106 Coordinator and members of the CRM team to identify the location and significance of cultural resources within the APE. If cultural resources within the APE have not yet been documented or evaluated for eligibility for listing on the National Register of Historic Places, the CRM team will determine whether identification of historic properties are needed by considering the following:
    i. The results of the file and literature search and whether adequate survey has already occurred and/or there is a potential for historic properties (i.e., previous disturbance or developed area);
    ii. Whether the proposed invasive plant management activity is ground disturbing and has the potential to affect historic properties;
    iii. Whether identified or potential historic properties within the APE can be avoided through standard conditions or measures; and
    iv. Whether the undertaking qualifies for streamlined review (defined in Section IV.B of this PA and Appendix 2);
    v. Comments received during the consultation process (Stipulation III, below).
4. Assess potential effects on historic properties from the undertaking by applying the Criteria of Adverse Effect set forth in 36 CFR 800.5(a)(1); when surveys are needed, the park will provide consulting Indian Tribes a copy of the draft report and cultural resource site forms for review. The park will consider Indian Tribal input on site eligibility and project effects;
5. If the ROMO Section 106 Coordinator determines no historic properties are within the APE, or the proposed undertaking would results in a determination of "no historic properties affected" or "no adverse effect," no further consultation is required, and the ROMO Section 106 Coordinator will document the following:
    i. Consultation conducted with the public and with Indian Tribes and/or descendants as defined by park affiliation studies needed to identify the presence or absence of sites of cultural or religious interest;
    ii. Any proposed protection measures of archeological sites to follow 36 CFR Part 68.
    iii. An annual report of all undertakings reviewed using the Stramlined Review process.

C. If ethnobotanical resources are identified during Tribal consultation and an undertaking may cause potential impacts to vegetation contributing to cultural landscapes and districts, contributing vegetation would be identified, flagged, and monitored during all streamlined activities.

D. Public access to the cultural resources assessment or other archeological reporting and documentation will remain confidential to the extent that they meet the definitions set forth at Section 304 of the National Historic Preservation Act, Section 9 of the Archeological Resource Protection Act, Executive Order 13007 Indian Sacred Sites, and similar legislation.

III. CONSULTATION FOR IMPLEMENTATION ACTIVITIES

A. Public Comment

For invasive plant management activities that do not qualify for the streamlined review process as set forth in Section IV of this PA, ROMO will consult with interested parties and members of the public interested in park cultural resources and in NPS actions that might affect those resources as part of the standard review process. The ROMO Superintendent will notify interested parties each year of undertakings that require standard review, to include areas proposed for activities under the Plan, and to solicit comment regarding potential effects to historic properties.

B. Tribal Consultation

The Federal government has a unique legal relationship with Indian Tribes set forth in the Constitution of the United States, treaties, statutes, and court decisions. This relationship is further informed and guided by Executive Orders and NPS agency management policies, which underscore the important relationship that traditionally associated Indian Tribes have with park lands and resources. The NPS is aware that historic properties of religious and cultural significance to Indian Tribes and groups are located on ancestral lands now encompassed by ROMO and that "Indian Tribes…possess special expertise in assessing the eligibility of historic properties that may possess religious and cultural significance to them," (36 CFR 800.4 (c)(1)). These qualifications are inherent to Indian Tribes and constitute qualifications independent of the Secretary of the Interior's Qualification Standards.

Consultations with Indian Tribes will be conducted in a sensitive manner, respectful of tribal sovereignty, and recognizing the government-to-government relationship between the NPS and Indian Tribes. The NPS and Indian Tribes and groups will continue to collaborate on resources management and historic preservation activities. The NPS has already determined that historic properties with religious and cultural significance to traditionally associated Indian Tribes and groups are within the APE. The NPS will continue to consult with traditionally associated Indian Tribes and groups on all activities throughout the implementation of the Plan.

The ROMO Superintendent will serve as the designated representative in government-to-government consultations with Federally recognized and traditionally associated Indian Tribes. The Section 106 Coordinator will provide day-to-day staff support for consultation with Indian Tribes and groups and serve as liaisons in communicating tribal concerns, suggestions, and recommendations to Park staff, staff in other NPS offices, and others involved in the implementation of the Plan.

Each year, ROMO will notify consulting Indian Tribes in writing and with associated map locations about areas proposed for activities under the Plan. Indian Tribes will be provided advanced notice of activities and will be provided 30 days to reply to the NPS verbally or in writing about any concerns.

C. SHPO Consultation

Consultation with the SHPO on projects reviewed under the Standard Review Process will occur in accordance with the procedures set forth in Section V of this PA. Consultation with

SHPO on activities that meet the criteria for streamlined review and implementation of this PA will occur annually in accordance with Sections IV and VIII of this PA.

D. Consultation with Local Governments and Applicants for Federal Assistance, Licenses, Permits, and Other Approvals

Where appropriate, the Superintendent shall actively seek the views and comments of local governments and certified local governments. Those seeking Federal assistance, licenses, permits, or other approvals are entitled to participate as a consulting party as defined in 36 CFR 800.2(c)(4) and will be consulted, as applicable.

IV. STREAMLINED REVIEW PROCESS

Where the ROMO Section 106 coordinator, in coordination with the CRM Team, determines the following criteria are met for a proposed undertaking, no further consultation is required. If the CRM Team cannot come to agreement on whether the plan activities qualify for the streamlined review process, the ROMO Section 106 Coordinator may initiate consultation under the Standard Review Process as outlined in Section V or consult directly with SHPO as an independent arbiter. Only activities that meet the criteria for streamlined review under this PA will be addressed in this manner.

If no concerns are expressed from the Tribes within 30 days, then ROMO staff may proceed with implementation of proposed Plan activities treatments, taking into consideration other interested parties, protection measures, standard operating procedures, and best management practices needed to protect historic properties in collaboration with the ROMO Section 106 coordinator.

A. Criteria for Using the Streamlined Review Process

1. The proposed Plan activity must be eligible for streamlined review listed in Section IV.B of this PA.
2. A cultural resources assessment (per Section II.B. of this PA) must have been prepared by the Section 106 Coordinator and approved by the CRM Team.
3. Proposed Plan activities meet criteria for no, low, or moderate levels of ground disturbance (see Appendix 2 for definition of ground disturbance levels).
4. Provided that the undertaking is eligible for being streamlined under Section IV.B of this PA, identified historic properties and any prehistoric or historic site, district, building, structure or object, including traditional cultural property, that do not have a consensus determination of eligibility and are located within the activity APE (per Section II.B.2, above) will be treated as historic properties and subject to avoidance measures and/or best management practices.
5. The ROMO Section 106 Coordinator, in coordination with the CRM Team, must have reviewed the activity and certified that the effects of the proposed activity on historic properties will **not be adverse** based on criteria in 36 CFR 800.5, including consideration of direct, indirect, and cumulative effects. The Effect Finding must be "No Historic Properties Affected" or "No Adverse Effect".
6. ROMO will undertake formal survey efforts of streamlined activity project areas subject to the availability of appropriated funds. ROMO will ensure that any survey undertaken conforms to the Secretary of the Interior's Standards for Identification and the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation.

B. Undertakings Eligible for Streamlined Review (Appendix 2)

The streamlined review process is intended for use on the following activities as well as similar undertakings that are the same in scope, scale, and impact:

1. Mechanical, Manual, and Cultural Treatments with No Ground Disturbance. These activities would occur above the ground surface and would not impact native soils, and therefore would not be subject to cultural resource survey identification efforts beyond those efforts undertaken for the cultural resource assessment:
    i. Herbicide spot treatment of individual plants;
    ii. Hand cutting or clipping flower heads or other above ground plant parts;
    iii. Mechanical and manual hand tools that cut vegetation above ground; and
    iv. Native seed dispersal, mulching and watering.
2. Mechanical, Manual, and Cultural Treatments with Low Potential for Ground Disturbance. The streamlined review process is intended to be used for activities with the potential to cause limited ground disturbance directly adjacent to small plants and their root systems:
    i. Hand pulling or severing roots;
    ii. Tarping with staples or nails;
    iii. Revegetation;
    iv. Willow cuttings planting; and
    v. Caging of planted trees.
3. Mechanical, Manual, and Cultural Treatments with Moderate Potential for Ground Disturbance. The streamlined review process is intended to be used for activities with the potential to cause moderate disturbance to soils around the root systems of moderately sized tap-rooted plants:
    i. Hand pulling or severing roots of weeds greater than a depth of 6 inches but less than 12 inches;
    ii. Revegetation (e.g., salvaging and replanting of small aspen, conifers, and shrubs and minor digging to plant nursery stock up to a depth of 12 inches);
    iii. Installing erosion control wattles or silt fence which are buried up to 6 inches in the ground and secured with stakes that may go up to 12 inches deep; and
    iv. Use of UTV for activities such as herbicide spraying.
4. Revegetation. Revegetation may be streamlined in areas that have been determined eligible or assumed as eligible for listing in the National Register as a cultural or ethnographic landscape, provided ground disturbance levels fall within the categories of No, Low, and Moderate Potential (Appendix 2). The streamlined review process is intended to be used for:
    i. Planting native plant species and placement of straw bales and wattles to improve erosion control;
    ii. Establishing native vegetation by seeding, raking, mulching, and watering to provide wildlife habitat, prevent invasion of exotic plants, and reduce erosion issues;

iii. Removing native plants from park locations and then replanting them in another location to promote native plant growth, provided both the locations that the plants are being removed from and the location they are being located to have been subject to complete review per the stipulations of this PA;

iv. Replacement of invasive or exotic landscape plantings with similar or compatible non-invasive plants to a cultural or ethnographic landscape that is in keeping with the Secretary of Interior's Standards for Historic Preservation; and

v. Mulching, which would include application of organic weed-free hay, bark, or wood chips, or other such ground cover over invasive plants, or to support the growth of native plants.

5. Installation of temporary signs, plaques, or wayside exhibits. This would include temporary signs, plaques, or waysides needed to inform the public about closure areas and treatment areas, provided that the signs can be driven into the ground without the need for digging post holes, and are not installed within the boundary of any archeological site or sensitive areas identified through tribal consultation where such signage would not be culturally appropriate.

V. STANDARD REVIEW PROCESS

All undertakings that do not qualify for streamlined review as described in Section IV above, will be reviewed in accordance with 36 CFR Part 800. The following are categories of Plan activities that are **NOT** eligible for streamlined review under this PA and must go through the Standard Review Process:

A. Mechanical/Manual Treatments and revegetation activities with a High Potential for Ground Disturbance such as excavations with heavy equipment or shovels greater than 12 inches in depth to remove invasive plants (Appendix 2).

B. Prescribed fire would be addressed as part of *Rocky Mountain National Park 2012 Wildland Fire Management Plan* and the 2008 Nationwide PA.

VI. INADVERTENT DISCOVERIES OR UNANTICIPATED EFFECTS

A. For situations when historic properties may be discovered or unanticipated effects on historic properties are found during implementation of any activity associated with the Plan, all invasive plant control activities in the area of the discovery or unanticipated effects will stop and the area secured from further disturbance.

B. An archeologist or cultural resource specialist who meets the Secretary of the Interior's Qualification Standards will document and evaluate the discovery for NRHP significance.

C. If archaeological materials are discovered as a result of any activity or undertaking, the discovery will be protected, all ground disturbing activities will cease within 30 meters (100 ft) of the discovery, and activity will cease in the area until the discovery is assessed and documented. If the Section 106 coordinator determines that the discovery is an isolate and determines it is not eligible for NRHP listing, it will be documented and the activity will proceed with no further consultation. For all other discoveries, ROMO will either assume the materials eligible for NRHP listing pursuant to 36 CFR 800.13(c) or consult with Indian Tribes and SHPO regarding eligibility and effect. ROMO will notify the SHPO and Tribes by phone within 48 hours of the discovery.

D. The ROMO Superintendent, in consultation with the ROMO Section 106 Coordinator and appropriate CRM Team members, will make reasonable efforts to avoid, minimize or mitigate adverse effects on those historic properties in consultation with the SHPO and the respective Indian Tribes.

VII. NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT (NAGPRA)

ROMO shall ensure that any American Indian burials or American Indian human remains, funerary objects, sacred objects and objects of cultural patrimony discovered during implementation of any activity under the Plan, or part of any activity associated with the Plan are treated with appropriate respect and according to Federal law, including, but not limited to, NAGPRA and its implementing regulations, 36 CFR Part 10. Actions described herein do not constitute compliance with provisions of NAGPRA.

If objections are raised by any American Indian Tribe regarding treatment of human remains or cultural items as defined under NAGPRA, the objection shall be resolved in accordance with NAGPRA.

VIII. ANNUAL REPORTING

An annual report of all undertakings reviewed using the Streamlined Review process under this PA will be prepared by the ROMO Section 106 Coordinator and provided to the SHPO and concurring parties. The annual report will be submitted for the preceding year by or before March 1 of the following year.

IX. DISPUTE RESOLUTION

Should any concurring party or signatory to this PA object at any time to any actions proposed or the manner in which the terms of this PA are implemented, the NPS shall consult with such party to resolve the objection. If the NPS determines that such objection cannot be resolved, the NPS will:

A. Forward all documentation relevant to the dispute, including the NPS's proposed resolution, to the ACHP. The ACHP shall provide the NPS with its advice on the resolution of the objection within 30 days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the NPS shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories [and concurring parties], and provide them with a copy of this written response. The NPS will then proceed according to its final decision.

B. If the ACHP does not provide its advice regarding the dispute within the 30 day time period, the NPS may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the NPS shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories [and concurring parties] to this PA, and provide them and the ACHP with a copy of such written response.

C. The NPS's responsibility to carry out all other actions subject to the terms of this PA that are not the subject of the dispute remain unchanged.

X. AMENDMENTS

This PA may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the ACHP. Five (5) years after the date of executing this PA, and every five (5) years

thereafter for the duration of the PA, ROMO shall consult with SHPO to review the sufficiency of this PA and consider amendments of its terms, as appropriate.

XI. TERMINATION

If any signatory to this PA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories to attempt to develop an amendment per Stipulation X, above. If within 30 days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate this PA upon written notification to the other signatories.

Once the PA is terminated, and prior to work continuing on the undertaking, the NPS must either (a) execute a new PA pursuant to 36 CFR Part 800.14(b) or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR Part 800.7. The NPS shall notify the signatories as to the course of action it will pursue.

XII. ANTI-DEFICIENCY ACT

The NPS's obligations under this PA are subject to the availability of appropriated funds, and the stipulations of this PA are subject to the provisions of the Anti-Deficiency Act. The NPS shall make reasonable and good faith efforts to secure the necessary funds to implement this PA in its entirety. If compliance with the Anti-Deficiency Act alters or impairs the NPS's ability to implement the stipulations of this agreement, the NPS shall consult in accordance with the amendment and termination procedures found at Stipulations X and XI of this PA.

XIII. DURATION

The NPS and signatories to this PA will conduct a periodic review every 5 years to reconsider the terms of this PA. Reconsideration may include the continuation or revision of this PA by amendment.

This PA will expire in 10 years from the date of its execution. Prior to such time, the NPS and signatories may consult to reconsider the terms of the PA and renew, amend, or terminate it.

EXECUTION of this PA by the NPS and SHPO, and implementation of its terms evidence that the NPS has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

APPENDICES

Appendix 1: Secretary of the Interior's Historic Preservation Professional Qualification Standards
Appendix 2: Ground Disturbance Category Definitions and Associated Methods and Tools for Each Category

SIGNATORIES:

National Park Service

_____ Date 1/29/19
Darla Sidles, Superintendent, Rocky Mountain National Park

Colorado State Historic Preservation Officer

_____ Date 1/29/19
Steve Turner, State Historic Preservation Officer

APPENDIX 1

Secretary of the Interior's Historic Preservation Professional Qualification Standards

The following requirements are those used by the National Park Service, and have been previously published in the Code of Federal Regulations, 36 CFR Part 61. The qualifications define minimum education and experience required to perform identification, evaluation, registration, and treatment activities. In some cases, additional areas or levels of expertise may be needed, depending on the complexity of the task and the nature of the historic properties involved. In the following definitions, a year of full-time professional experience need not consist of a continuous year of full-time work but may be made up of discontinuous periods of full-time or part-time work adding up to the equivalent of a year of full-time experience. More information about applying the standards, closely related fields to each discipline, and documenting professional experience is available at https://www.nps.gov/history/local-law/gis/html/quals.html.

STANDARD FOR ARCHEOLOGIST

Prehistoric: The applicant, employee, consultant, or advisor will have a graduate degree in Anthropology with a specialization in Prehistoric Archeology, or a graduate degree in Archeology with a specialization in Prehistoric Archeology, or a graduate degree in a closely related field, PLUS a minimum of two and one-half (2 1/2) years of full-time professional experience in applying the theories, methods, and practices of Archeology that enables professional judgments to be made about the identification, evaluation, documentation, registration, or treatment of prehistoric archeological properties in the United States and its Territories (at least six months of experience must have been acquired in the performance of field and analytical activities under the supervision of a professional prehistoric archeologist, and one year of experience in the study of the archeological resources of the prehistoric period must have been at a supervisory level); AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation.

Historical: The applicant, employee, consultant, or advisor will have a graduate degree in Anthropology with a specialization in Historical Archeology, or a graduate degree in Archeology with a specialization in Historical Archeology, or a graduate degree in a closely related field (see Academic Background for Archeology), PLUS a minimum of two and one-half (2 1/2) years of full-time professional experience applying the theories, methods, and practices of Archeology that enables professional judgments to be made about the identification, evaluation, documentation, registration, or treatment of historic archeological properties in the United States and its Territories (at least six months of experience must have been acquired in the performance of field and analytical activities under the supervision of a professional Historical Archeologist, and one year of experience in the study of the archeological resources of the historic period must have been at a supervisory level); AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation

STANDARD FOR HISTORIAN

The applicant, employee, consultant, or advisor will have a graduate degree in History or a closely related field of study, PLUS a minimum of two (2) years of full-time professional experience applying the theories, methods, and practices of History that enables professional judgments to be made about the identification, evaluation, documentation, registration, or treatment of historic properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation; OR...

An undergraduate degree in History or a closely related field of study, PLUS a minimum of four (4) years of full-time professional experience applying the theories, methods, and practices of History that enables

professional judgements to be made about the identification, evaluation, documentation, registration, or treatment of historic properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation

STANDARD FOR ARCHITECTURAL HISTORIAN

The applicant, employee, consultant, or advisor will have a graduate degree in Architectural History or a closely related field of study, PLUS a minimum of two (2) years of full-time professional experience applying the theories, methods, and practices of Architectural History that enables professional judgments to be made about the identification, evaluation, documentation, registration, or treatment of historic properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation; OR...

An undergraduate degree in Architectural History or a closely related field of study, PLUS a minimum of four (4) years of full-time professional experience applying the theories, methods, and practices of Architectural History that enables professional judgments to be made about the identification, evaluation, documentation, registration, or treatment of historic properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation

STANDARD FOR HISTORICAL ARCHITECT

The applicant, employee, consultant, or advisor will have a State Government-recognized license to practice Architecture, PLUS a minimum of two (2) years of full-time professional experience applying the theories, methods, and practices of Architecture that enables professional judgments to be made about the evaluation, documentation, or treatment of historic structures in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation; OR...

A Masters of Architecture degree with demonstrable course work in Architectural Preservation, Architectural History, Historic Preservation, Historic Preservation Planning, or a closely related field, PLUS a minimum of two (2) years of full-time professional experience applying the theories, methods, and practices of Historic Architecture that enables professional judgments to be made about the evaluation, documentation, or treatment of historic structures in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation; OR...

A Bachelors of Architecture degree with at least one year of graduate study in Architectural Preservation, Architectural History, Historic Preservation, Historic Preservation Planning, or a closely related field, PLUS a minimum of two (2) years of full-time professional experience applying the theories, methods and practices of Historic Architecture that enables professional judgments to be made about the evaluation, documentation, or treatment of historic structures in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation

STANDARD FOR HISTORICAL LANDSCAPE ARCHITECT

The applicant, employee, consultant, or advisor will have a State Government-recognized license to practice Landscape Architecture, PLUS a minimum of two (2) years full-time professional experience applying the

theories, methods, and practices of Landscape Architecture that enables professional judgments to be made about the identification, evaluation, documentation, registration, or treatment of historic properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation; OR...

A Masters degree in Landscape Architecture with demonstrable course work in the principles, theories, concepts, methods, and techniques of preserving cultural landscapes, PLUS a minimum or two (2) years of full-time professional experience applying the theories, methods, and practices of Landscape Architecture that enables professional judgments to be made about the identification, evaluation, documentation, registration, or treatment of historic properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation; OR...

A four-year or five-year Bachelors degree in Landscape Architecture, PLUS a minimum of three (3) years of full-time professional experience applying the theories, methods, and practices of Landscape Architecture that enables professional judgments to be made about the identification, evaluation, documentation, registration, or treatment of historic properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation

STANDARD FOR HISTORIC PRESERVATION PLANNER

The applicant, employee, consultant, or advisor will have a State Government-recognized certification or license in Land-use Planning, PLUS, minimum of two (2) years of full-time professional experience applying the theories, methods, and practices of Historic Preservation Planning that enables professional judgments to be made about the identification, evaluation, documentation, registration, protection, or treatment of historic and archeological properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation; OR...

A graduate degree in Planning with demonstrable course work in Historic Preservation, or a graduate degree in a closely related field of study with demonstrable course work in Historic Preservation, PLUS a minimum of two (2) years of full-time professional experience applying the theories, methods, and practices of Historic Preservation Planning that enables professional judgments to be made about the identification, evaluation, documentation, registration, protection, or treatment of historic and archeological properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation; OR...

An undergraduate degree in Planning with demonstrable course work in Historic Preservation or an undergraduate degree in a closely related field of study with demonstrable course work in Historic Preservation, PLUS a minimum of four (4) years of full-time professional experience applying the theories, methods, and practices of Historic Preservation Planning that enables professional judgments to be made about the identification, evaluation, documentation, registration, protection, or treatment of historic and archeological properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation.

STANDARD FOR HISTORIC PRESERVATIONIST

The applicant, employee, consultant, or advisor will have a graduate degree in Historic Preservation or a closely related field of study (see Academic Background for the Historic Preservation discipline), PLUS a minimum of two (2) years of full-time professional experience applying the theories, methods, and practices of Historic Preservation that enables professional judgments to be made about the identification, evaluation, documentation,

registration, or treatment of historic and prehistoric properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation; OR...

An undergraduate degree in Historic Preservation or a closely related field of study, PLUS a minimum of four (4) years of full-time professional experience applying the theories, methods, and practices of Historic Preservation that enables professional judgments to be made about the identification, evaluation, documentation, registration, or treatment of historic and prehistoric properties in the United States and its Territories; AND products and activities that demonstrate the successful application of acquired proficiencies in the discipline to the practice of historic preservation

APPENDIX 2

Ground Disturbance Category Definitions and Associated Methods and Tools for Each Category

Category of Disturbance	Potential depth of disturbance below ground surface	Extent of disturbance	Associated Tools or Methods
NO GROUND DISTURBANCE	None	No ground disturbance. Treatments limited to those that occur above ground surface and do no impact native soils.	• Herbicide (cut stump/foliar/pre-emergent treatment); Herbicide treatments are generally spot treatments of individual plants using backpack sprayer rather than a broadcast treatment of a large area. • Hand cutting or clipping of flower heads, or other above ground plant parts. • Mechanical and manual hand tools that cut vegetation above ground (including push mowers, weed whackers, weed whips, brush cutters, loppers, chainsaws, and hand pruners); and • Native seed dispersal, mulching and watering
Example 1. Clipping and bagging of flowers heads of musk thistle or mullein to prevent seed dispersal of these invasive plants. Example 2. Foliar spray. Canada thistle is a perennial plant with rhizomotous root system that must be treated by spraying leaves with herbicides.			

LOW	Less than 6 inches	Ground disturbance is limited to areas directly adjacent to small individual tap-rooted plants. Disturbance would typically be less than 1-foot in diameter per individual plant with the exception of revegetation activities. Disturbance is typically limited to duff but may extend up to 6 inches below ground surface. Soils disturbed are typically in contact with root systems.	• Hand pulling or severing roots of weeds with shallow root systems using shovel, McLeod, Pulaski, if within 6" below ground surface in small or sparse infestations; in larger dense populations alternative methods such as herbicide treatment would be used to protect cultural and natural resources. • Tarping with staples or nails • Revegetation (e.g., seed planting, raking, and minor digging to plant nursery stock to a depth of up to 6"); nursery stock is generally in 1-inch diameter containers, but may sometimes be quart sized pots. • Willow cuttings (up to 2" diameter) driven into ground up to 24" deep • Caging of planted trees which may require driving up to 2 t-posts into ground up to 24".
Example 1. Removal of musk thistle plants in which a shovel must be driven into the ground at an angle to sever the root crown about 2-4" below the ground surface. Example 2. Caging of a planted aspen tree with fencing and 2 t-posts to prevent deer and elk from browsing on the young tree. Example 3. Planting native grasses in 1" diameter containers around a campground comfort station to decrease erosion around the structure.			

Category of Disturbance	Potential depth of disturbance below ground surface	Extent of disturbance	Associated Methods and Tools
MODERATE	6 - 12 inches	Ground disturbance is limited to soils around the root systems of individual moderately sized tap-rooted plants. Disturbance would typically be less than 2 feet in diameter, and limited to duff, top soil, and intact A horizon soils that are already disturbed from the rootball of the plants being removed. The 2 ft diameter would not apply to revegetation activities.	• Hand pulling or severing roots of weeds greater than a depth of 6" but less than 12"; in larger dense populations, alternative methods such as herbicide treatment would be used to protect both cultural and natural resources. • Use of shovels, McLeods, and Pulaskis. • Revegetation (e.g., salvaging and replanting of small aspen, conifers, and shrubs and minor digging to plant nursery stock up to a depth of 12"); nursery stock is generally in 1" diameter containers, but may sometimes be in quart or gallon sized pots. • Installing erosion control wattles or silt fence which are buried up to 6" in the ground and secured with stakes that may go up to 12" deep. • Use of UTV for activities such as herbicide spraying.
Example 1. Installing erosion control wattles where soils are loose after removing a dense patch of mullein on a hill slope. Example 2. Removal of mullein by hand pulling which may cause soil disturbance up to 6-8" which would not exceed the depth of root growth. Example 3. Planting of quart size and gallon size shrubs such as fringe sage to establish vegetation to encourage visitors to stay on trail.			

HIGH	Greater than 12 inches	Ground disturbance is associated with exotic plant control that exceeds moderate disturbance. Certain restoration activities would also exceed moderate disturbance.	• Hand pulling, grubbing, digging, or severing roots of weeds greater than a depth of 12". • Revegetation (e.g., salvaging and planting of large nursery stock or salvaged plant material)
Example 1. Major revegetation project including addition of topsoil incorporated to a depth of greater than 12" for successful replanting of large aspen trees.			