

L7617
PIN 10198

FINDING OF NO SIGNIFICANT IMPACT EXOTIC PLANT MANAGEMENT PLAN

**North Carolina and Virginia
Blue Ridge Parkway
USDI, National Park Service**

INTRODUCTION

The legislated purpose of the Blue Ridge Parkway (Parkway) under the Act of June 30, 1936, is to link Shenandoah National Park in Virginia with Great Smoky Mountains National Park in North Carolina and Tennessee by way of a recreationally oriented motor road. Inherent within this legislation and in the subsequent planning of the Parkway is a fundamental objective of providing opportunities to enjoy the scenic beauty of the Southern Appalachian Mountains. The Parkway management further promotes public understanding, appreciation and knowledge of Appalachia by preserving and managing the natural, historic and cultural resources contained within Park lands.

The presence and spread of exotic plant species is a significant concern to park management. The term "exotic" is defined as "a species occurring in a given place as a result of direct or indirect, deliberate, or accidental actions by humans" (USDI 1991) and is used synonymously with "alien", "non-native" and "introduced". Many exotic plants are ecologically harmful. They can alter the natural and/or historic scene and weaken the natural function of many native plant communities.

Executive Order 13112 requires Federal agencies to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause.

During the past 20 years, only incidental attention has been given to control and eradicate exotic plant species within the Parkway. Several species have spread vigorously due to this lack of attention. Dense mats of kudzu (*Pueraria lobata*), Japanese honeysuckle (*Lonicera japonica*), Multiflora rose (*Rosa multiflora*), Oriental bittersweet (*Celastrus orbiculatus*), and Plume grass (*Miscanthus sinensis*) now exist in many locations. Princess tree (*Paulownia tomentosa*) and tree of heaven (*Ailanthus altissima*) have invaded many disturbed sites, including cut and fill slopes formed during Parkway construction and perpetuated through vista clearing and maintenance activities.

The Parkway's *Exotic Plant Management Plan* was developed following National Park Service (NPS) guidelines for natural resource management and Integrated Pest Management (IPM) procedures. According to the guidelines, "Management of populations of exotic plant and animal species, up to and including eradication, would be undertaken wherever such species threaten park resources or public health and when control is prudent and feasible." (NPS *Management Policies*, 2006) Managers will take action whenever such species interfere with natural processes and the perpetuation of natural features or native species, especially those that are endangered, threatened, or otherwise unique. The IPM procedures have been and will continue to be used to determine when to control exotic plants and whether to use mechanical, physical, chemical, cultural, or biological means, or a combination of these.

The NPS has prepared an Environmental Assessment (EA) that evaluates alternatives for establishing park guidelines that will be used to determine when and how to control non-native plants. This includes the use of mechanical, physical, chemical, cultural and biological means. The EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code 4321 et seq.), the Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations 1500 through 1508) for implementing NEPA, and the NPS NEPA compliance guidance handbook (Director's Order (DO)-12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*).

PREFERRED ALTERNATIVE

The NPS has chosen to select the Preferred Alternative (Alternative B) from the EA, which is to implement the Park's Exotic Vegetation Management Plan using IPM techniques of mechanical and herbicidal control. Under this alternative a combination of mechanical and chemical methods is proposed to treat and control invasive exotic plants. The mitigations and other features of Alternative B evaluated in the EA substantiate features of this decision.

As part of the Preferred Alternative, a combination of mechanical and chemical methods is proposed to treat and control invasive exotic plants. This alternative provides flexibility to match the appropriate control method to the site conditions. At sites where the exotic plant population is small and rare species occur, mechanical methods will be employed.

The use of mechanical methods involves using hand and/or power tools to dig, pull, and cut plants. Some methods may occur once, such as pulling garlic mustard, or repeatedly, such as continuously cutting multiflora rose until the plants energy reserves have been exhausted. When exotic populations are relatively small or the site contains sensitive resources then mechanical methods are viable treatment options.

The use of herbicide chemicals to treat and control invasive exotic plants is a viable treatment options when the target population is large. Herbicide could be applied using three methods: foliar application, cut surface application, and basal bark application.

ALTERNATIVES CONSIDERED

The EA analyzed two alternatives, including Alternative A, the No-Action Alternative, and Alternative B, the Preferred Alternative. Under the No Action Alternative, exotic species would be managed as they are currently, on a case-by-case basis without regard to Parkway-wide priorities. Species and areas where control of exotics would be undertaken would be managed according to NPS policy, IPM processes, and regulations concerning use of herbicides. Follow-up and post-control evaluations would be made and retreatment recommended when evaluations warrant.

Since a comprehensive survey of the Parkway would not be conducted, lesser priority areas could be controlled and higher priority areas that are unknown to managers could be ignored. In many areas of the Park, invasive exotic plants would be allowed to spread and grow unchecked by any human intervention without understanding its impact on surrounding ecosystems. Native systems could be placed at risk as non-native species out-compete native species.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The Environmentally Preferred Alternative is determined by applying the criteria suggested in NEPA, which is guided by the CEQ. The CEQ provides direction that “the environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA (Section 101(b)).” The six NEPA goal statements include:

- (1) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;*
- (2) Assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;*
- (3) Attain the widest range of beneficial uses of the environment without degradation, risk to health and safety, or other undesirable and unintended consequences;*
- (4) Preserve important historic, cultural, and natural aspects of our national heritage, and maintain wherever possible, an environment which supports diversity and variety of individual choice;*
- (5) Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and*
- (6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.*

Following environmental analysis, the Environmentally Preferred Alternative is the alternative that causes the least damage to the biological and physical environment or that best protects and enhances the natural, historic, and cultural resources of the site. Although Alternative A would not introduce herbicides into the environment, it would not contribute to meeting any of the six NEPA goals. Conversely, Alternative B will contribute to meeting five of the six NEPA goals in the project area.

Alternative A would interfere with the NPS to “*fulfill the responsibilities . . . as trustee of the environment,*” by allowing exotic plant species to alter the natural and/or historic scene and impair the natural function of many native plant communities along the Parkway. Conversely, Alternative B will contribute to this goal by providing control of exotics which will minimize the economic, ecological, and human health impacts that invasive species cause.

“*Safe, healthful, . . . and esthetically . . . pleasing surroundings*” will better be attained by Alternative B. As mentioned above, this alternative will provide control of exotics which will enhance the most valued recreational opportunity on the Parkway, scenic viewing.

Alternative B will provide a “*range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.*” The overall effect of Alternative B will improve the native landscape along the Parkway. As long as the herbicides are approved through the NPS process, applied and disposed of in accordance with label instructions, and stored according to NPS standards, risk of health or safety is minimized.

Alternative A would detract from helping to “*preserve important historical, cultural, and natural aspects of our national heritage*” by allowing non-historical vegetation to be established in cultural landscapes. Alternative B will aid in restoring the integrity of the cultural landscapes within the Parkway.

Alternative B will aid in achieving “*a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities*” by enabling preservation of campground spaces, maintaining usable trails, keeping Parkway vistas open by preserving them from aggressive exotic vegetation growth. Alternative A would actually detract from this goal without a planned control of exotic vegetation.

Neither Alternative A nor Alternative B would much contribute to or detract from enabling the NPS to achieve “*a balance between population and resource use.*”

Of the two alternatives, Alternative B is environmentally preferred. The deciding factors include:

Alternative B provides flexibility in matching the best treatment strategy to the site, target species, conditions, and sensitivity of area. It is based on a sound understanding of the ecology and biology of the exotic pest and its environment. As an adaptive management tool, information about those resources that are managed is continuously updated and used to make adjustments to management approaches.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined by 40 CFR 1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse:

Under the Preferred Alternative (Alternative B), there will be negligible, short-term adverse impacts to soil resources if resource protection measures are followed due to disruption of the surface soil as a result of using mechanical methods. However, there will be long-term beneficial impacts due to the preservation of soil characteristics.

Long-term, moderate to major, beneficial impacts on vegetation, rare species, threatened and endangered species, wildlife, including native birds, wetlands, invertebrate fauna, and water quality, will result from Alternative B.

Alternative B will have moderate to major, long-term beneficial impacts on cultural landscapes, recreation and visual resources.

Degree of effect on public health and safety:

As long as herbicides are used in accordance with project labels and the mitigation measures described herein, there will be no long-term adverse impacts on human health and safety under the Preferred Alternative.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:

As discussed in the EA, there are no prime farmlands or wild and scenic areas that will be affected by implementation of the Preferred Alternative. There are however, wetlands that will be affected by implementation of the Preferred Alternative. These will be long-term, minor to moderate beneficial impacts due to removal of exotic plants which will ensure that wetlands are preserved. In addition, the project will not directly, indirectly, or cumulatively affect archeological resources, historic and prehistoric structures, museum collections and ethnographic resources.

Degree to which effects on the quality of the human environment are likely to be highly controversial:

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

Degree to which the possible effects on the quality of the human environment are highly uncertain, or involve unique or unknown risks:

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

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:

The NPS will implement the Exotic Plant Management Plan and managers will take action whenever such species interfere with natural processes and the perpetuation of natural features or native species, especially those that are endangered, threatened, or otherwise unique. The IPM procedures will continue to be used to determine when to control exotic plants and whether to use mechanical, physical, chemical, cultural, or biological means, or a combination of these. These future activities will not result in significant adverse effects on the natural or human environment; overall environmental effects will be beneficial. The Preferred Alternative will not represent a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant, but cumulatively significant, impacts:

As described in the EA, the action is not related to other actions with individually insignificant but cumulatively significant impacts.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources:

In accordance with Section 106 of the National Historic Preservation Act, consultation and comment were solicited from the Virginia and North Carolina State Historic Preservation Officers (SHPO). As discussed in the EA, no archaeological resources, historic properties, museum collections and ethnographic resources will be affected by implementation of the Preferred Alternative. Cultural landscapes will be beneficially affected by implementation of the Preferred Alternative.

After applying the Advisory Council on Historic Preservation's criteria of adverse effects (36 CFR Part 800.5, *Assessment of Adverse Effects*), the NPS concludes that implementation of the Preferred Alternative will have *no adverse effect* on cultural resources along the Blue Ridge Parkway. The Parkway sent a letter stating such to both Virginia and North Carolina SHPO offices in July 2006 requesting concurrence with this finding. The Virginia SHPO concurs with the Parkway's finding of No Adverse Effect on cultural resources. No comment was received from the North Carolina SHPO.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat:

The United States Fish and Wildlife Service (USFWS), the Virginia Department of Conservation and Recreation (VDCR), and the North Carolina Natural Heritage Database were consulted regarding potential impacts of the project on natural heritage resources, including rare, threatened, or endangered plant and animal species. Federal or State-listed threatened or endangered plants or animals will benefit under the Preferred Alternative by removing invasive exotic plants which threaten them. These findings were confirmed in a response letter from the USFWS dated May 12, 2006. The VDCR had no comment on the project.

The North Carolina Wildlife Resources Commission (NCWRC) was consulted in April 2006 with regards to effects on wildlife. In a response letter dated June 5, 2006, the NCWRC recommended that native plants that are valuable to wildlife for food and cover be planted where exotic plants that are similarly important are eliminated. In compliance with this request, the Blue Ridge Parkway will ensure that herbicides are used correctly and that disturbed areas are restored quickly.

Whether the action threatens a violation of Federal, State, or local environmental protection law:

The implementation of the Preferred Alternative violates no Federal, State, or local environmental protection laws.

IMPAIRMENT

In addition to reviewing the list of significance criteria, the NPS has determined that implementation of the Preferred Alternative will not constitute an impairment to the Blue Ridge Parkway's resources and values. This conclusion is based on a thorough analysis of the environmental impacts described in the EA, the public comments received, relevant scientific studies, and the professional judgment of the decision-maker guided by the NPS Organic Act, the General Authorities Act, and NPS *Management Policies 2006*. As described in the EA, implementation of the Preferred Alternative will not result in major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the Blue Ridge Parkway; (2) key to the natural or cultural integrity of the Park or to opportunities for enjoyment of the Park; or (3) identified as a goal in the Parkway's General Management Plan or other relevant NPS planning documents.

MITIGATION

Mitigation measures were analyzed as part of the action alternative. Mitigation measures have been designed to minimize, reduce, or eliminate the impacts from proposed activities under the Preferred Alternative (Alternative B). Mitigation measures undertaken during project implementation will include, but will not be limited to those listed below.

Herbicide Use

1. Application of herbicides will comply with applicable Environmental Protection Agency label restrictions and State and Federal laws. All label warnings and restrictions will be strictly adhered to by the applicator, including suggested personal protective equipment.
2. Application of herbicides will comply with the NPS IPM protocols, including approval and reporting processes.
3. Herbicides will be applied by Parkway biologists, biological technicians, or personnel trained and certified in chemical application or under direct, on-site supervision of State-certified personnel.
4. Herbicide application will not be permitted when any of the following conditions exists: (1) the temperature exceeds 90 degrees F, (2) the relative humidity is less than 50 percent, (3) the wind speed exceeds 5 mph, or (4) fog, inversion, or precipitation is present. A daily record of weather conditions will be taken at each project site.
5. Herbicides known to have adverse impacts on aquatic ecosystems will not be applied within 200 feet of streams or open bodies of water to minimize human exposure.
6. Herbicides will be applied at the lowest rate effective in meeting project objectives and according to guidelines for protecting human health.
7. Herbicides will not be mixed or stored within 100 feet of any perennial stream. Herbicides will be mixed off-site and by certified herbicide applicators. Applicators will not carry concentrated amounts of herbicides in the field.

Only herbicides approved for use near waterways will be considered under chemical treatment methods in wetland and water bodies.

Human Health and Safety

1. Personal Protective Equipment will be required by all personnel applying herbicides.
2. Personnel will receive training in use of mechanical tools (power tools and hand tools).
3. Personnel will read human safety concerns associated with each herbicide prior to use.
4. Treatments of exotics at developed recreation areas such as picnic areas and campgrounds or dispersed areas of high concentrated use will be scheduled during low-use periods and when the areas are temporarily closed.

Threatened and Endangered Species

1. Prior to treating an area using any control method, all occurrences of rare species will be determined using existing information and on-site surveys conducted by Park biologists.
2. If required, spot application of herbicides may be used by NPS biologists to mitigate impacts of drift.
3. Chemicals will not be mixed in the immediate proximity of any state- or federally-listed species to reduce and prevent accidental spills.
4. Exotics in wetlands known to contain bog turtle will not be removed during nesting season, generally May through July.

General

1. Personnel will clean their boots, tools, and machinery before departing an infested worksite to reduce seed dispersal.

2. On slopes exceeding 20 percent, hand pulling or any other treatment option that disturbs surface soils will not be utilized to minimize soil erosion and sedimentation. If a treatment is selected that does disturb soils, then erosion control and reseeding is required to stabilize soils.
3. Any activities that result in large areas of bare soil will be seeded and mulched if native vegetation does not re-colonize the area.
4. At sites where the exotic seed bank is large, treatment methods that disturb and expose open soil (such as hand pulling) will not be used.
5. To minimize impacts to non-target species when using mechanical or chemical treatments the following options will be considered:
 - a. Employ the use of selective herbicides (such as Transline™),
 - b. Apply herbicide with high accuracy using cut stump or basal bark techniques,
 - c. Apply herbicide when non-target species are dormant and below ground (herbaceous perennials),
 - d. Minimize the use of walk-behind mowers.
6. Fuel spills will be reported immediately.
7. Searches of the immediate area will be made to ensure that nests are not in the effected area. Searches will also be made for animals that may remain in the area, such as snakes, that may rely on camouflage to avoid danger rather than fleeing the area.
8. No heavy equipment will be used along stream banks or shorelines to prevent sedimentation of the waters.

PUBLIC INVOLVEMENT

To ensure that the Parkway and its programs are coordinated with the programs and objectives of State, Federal, and local governments and private organizations, it is the Parkway's objective to work with these agencies and organizations during the planning process. Consultation and coordination have occurred with numerous agencies during the preparation of this EA. On April 11, 2006, the Parkway Superintendent mailed a scoping notice announcing the project proposal, notified interested parties where more information could be obtained, and invited their review comments. The scoping comment period lasted 35 days.

As a result of the scoping effort, 11 responses were elicited. All comments received in response to the scoping notices have been duly considered and will remain in the project record throughout this planning process.

A copy of the EA was sent to all persons who requested a copy, as well as to other pertinent agencies and individuals potentially affected by the Preferred Alternative. The EA was also made available to all NPS employees along the Parkway. A public notice/news release was published in local newspapers along the Blue Ridge Parkway announcing the availability of the EA and requesting public and agency comments on the EA. In addition, the EA was posted and available for review on the NPS Planning Website (PEPC) at <http://parkplanning.nps.gov/>, as well as Parkway Headquarters.

The EA was available for public review for over 30 days, which ended October 31, 2006.

One hundred twenty comments were received in response to this public review, some of which provided additional recommendations to further minimize resource damage during implementation of the Preferred Alternative. In response to these comments, the NPS incorporated these additional mitigation measures into the EA, and will implement the measures as part of the project.

Several concerns were raised during the public review process and are provided in the Errata Sheet attached to this document.

All comments received in response to the scoping notices have been duly considered and will remain in the project administrative record.

CONCLUSION

In consideration of the comments received throughout the planning process, careful review of potential resource and visitor impacts, and developing appropriate mitigation to protect resources, the Preferred Alternative best strikes a balance between the widest range of use and enjoyment of the Blue Ridge Parkway without degradation of the environment or risk of health or safety.

The Preferred Alternative does not constitute an action that normally requires preparation of an Environmental Impact Statement (EIS). The Preferred Alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are minor and temporary in effect. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other 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 action will not violate any Federal, State, or local environmental protection law.

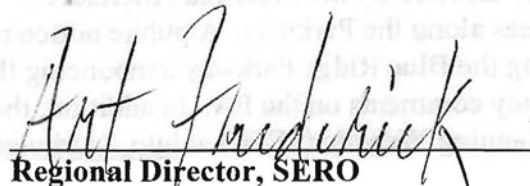

Based on the foregoing, it has been determined that an EIS is not required for this proposed project on NPS lands, and thus, will not be prepared. Implementation may take place immediately after the date of this decision.

Recommended:


Superintendent, Blue Ridge Parkway

3/2/07
Date

Approved:


Regional Director, SERO


3/20/07
Date

Errata Sheet

Exotic Plant Management Plan

A listing of the concerns raised by various individuals and/or government agencies during the public review of the Environmental Assessment (EA) and the National Park Service (NPS) response to those issues follows:

Concern #1, raised by the National Parks Conservation Association (NPCA): Suggested that the prioritization scheme be changed from one that is geographically based to an ecological method where the biology of individual exotics species are considered. They stated that it may be that some species from low priority areas are invading high priority areas, and that it would make sense to spend resources on those species that are most infectious.

NPS Response #1: First, all of our high priority exotic species are highly invasive. Second, because the Blue Ridge Parkway is a linear park it is highly influenced by adjacent lands. Yes, exotics are transported along the motor road by mowers and animals, but it would take many years for an exotic plant to move miles along the motor road, and much less time for that same plant to invade the park from adjacent neighbors. Third, the NPS is charged with protecting threatened and endangered species (GPRA Ia2A), species of management concern (GPRA Ia2B), and wetlands (GPRA Ia1C), therefore, those sites containing these resources simply must be the highest priority for controlling exotic plants. Fourth, again because this park is linear, it is unrealistic to think that we can control exotic plants in low priority areas (Asheville and Roanoke corridors) that are already heavily infested and which are bordered by heavily infested lands.

Concern #2, raised by NPCA: Suggested that biological control is not taken seriously because of the statement within the EA, “there are concerns about introducing one exotic to control another exotic.”

NPS Response #2: That statement simply emphasizes that careful and thorough research is absolutely necessary before a non-native insect or disease is released to control another non-native pest. While there are a handful of success stories, too often attempts to implement biological control have backfired in the past. The Parkway is not against biological control if it is done right. The Parkway has participated in research programs looking at developing biological controls for Garlic Mustard and Purple Loosestrife. The Parkway is currently working with the United States Department of Agriculture - Forest Service to use a suite of biological control measures to combat the Hemlock Woolly Adelgid. Biological control is most likely the only long-term hope for controlling many non-native pests. The park will continue to cooperate with any and all efforts to develop biological control for exotic plants.

Concern #3, raised by NPCA: Suggested that thermal techniques should be added to the arsenal of techniques to control exotic plants.

NPS Response #3: There are two ways in which thermal techniques could be used (1) backpack propane torches applied directly to individual plants, and (2) prescribed fire applied to many plants across several square meters or acres. Neither technique has not been thoroughly investigated for effectiveness or feasibility; therefore, it is premature to add to the Management Plan/EA. If these techniques prove useful the plan will be amended. Both techniques will require suppression measures be in place to handle accidental spread of fire. Currently the park does not have this capability.

Concern #4, raised by the County of Roanoke: “Also, within the Exotic Plant Management Plan on Page 5, Section A, the text outlines the rare situations in which an exotic species may be introduced or maintained to meet specific, identified management needs when all feasible and prudent measures to minimize the risk of harm have been taken. The fourth bulleted measure is vague as to whether or not an agricultural producer (near the Parkway) may grow/cultivate exotic herbaceous or woody ornamentals for sale as nursery stock. It is already understood that all feasible and prudent measures will be taken to prevent outbreak; however, will agricultural plant production be limited to the point where it is not feasible to use that property for nursery production? This might be a concern for those agricultural producers looking to diversify their farming operations.”

NPS Response #4: This comment seems to address concerns about adjacent landowners. The NPS has no control about what landowners adjacent to or near the Parkway grow on their lands. If a nearby landowner were to start growing an invasive species and seed from this source began to affect NPS lands, then the NPS would educate that landowner about the species of concern and try to come to some mutually agreeable solution.

Concern #5, raised by the Virginia Department of Environmental Quality (DEQ), Water Division: The DEQ requested that No. 7 on page 19 in the EA, which states that herbicides would not be mixed or stored within 100 feet of any perennial stream, be clarified to include ephemeral channels, intermittent, channels, wetlands, and open water.

NPS Response #5: This change has been made within the EA.