

# Management Objectives

The interdisciplinary planning team developed numerous objectives to guide preparation of the exotic plant management plan and environmental impact statement. The objectives relate to five categories: presence of exotic plants, cultural resources, operations to control exotic plants, visitors and the public, government partners / neighboring communities, and restoration.

## PRESENCE OF EXOTIC PLANTS

- Establish priorities for exotic plants to be treated and treatment locations within park units.
- Reduce the number of targeted exotic plants to minimize the threat to natural resources (native habitat, plants, and wildlife).
- Reduce to the greatest extent possible the introduction of new exotic plants into park units.
- Ensure that park exotic plant management programs support, and are consistent with, south Florida ecosystem restoration goals.

## CULTURAL RESOURCES

- Reconcile potential conflicts between preservation of significant cultural landscapes and removal of exotic plants.
- Preserve plants and sites valued by Native Americans and other traditional cultures while reducing the spread of exotic plant species.

## OPERATIONS TO CONTROL EXOTIC PLANTS

- Conduct the exotic plant management plan so it is continually monitored and improved; environmentally safe; incorporates best management practices; and supports, and is supported by, science and research.
- Minimize unintended impacts of control measures on park resources, visitors, employees, and the public.
- Use federal resources with increased efficiency.
- Ensure that control measures are consistent with the *Wilderness Act* and the *National Park Service Wilderness Policy*.

## VISITORS AND THE PUBLIC

- Increase visitor and public awareness of the impacts exotic plants have on native habitat and species and on cultural resources, building support for National Park Service management efforts.

## GOVERNMENT PARTNERS / NEIGHBORING COMMUNITIES

- Coordinate efforts with partners and neighbors (nationally and internationally) to establish compatible goals and provide assistance to achieve them.

## RESTORATION

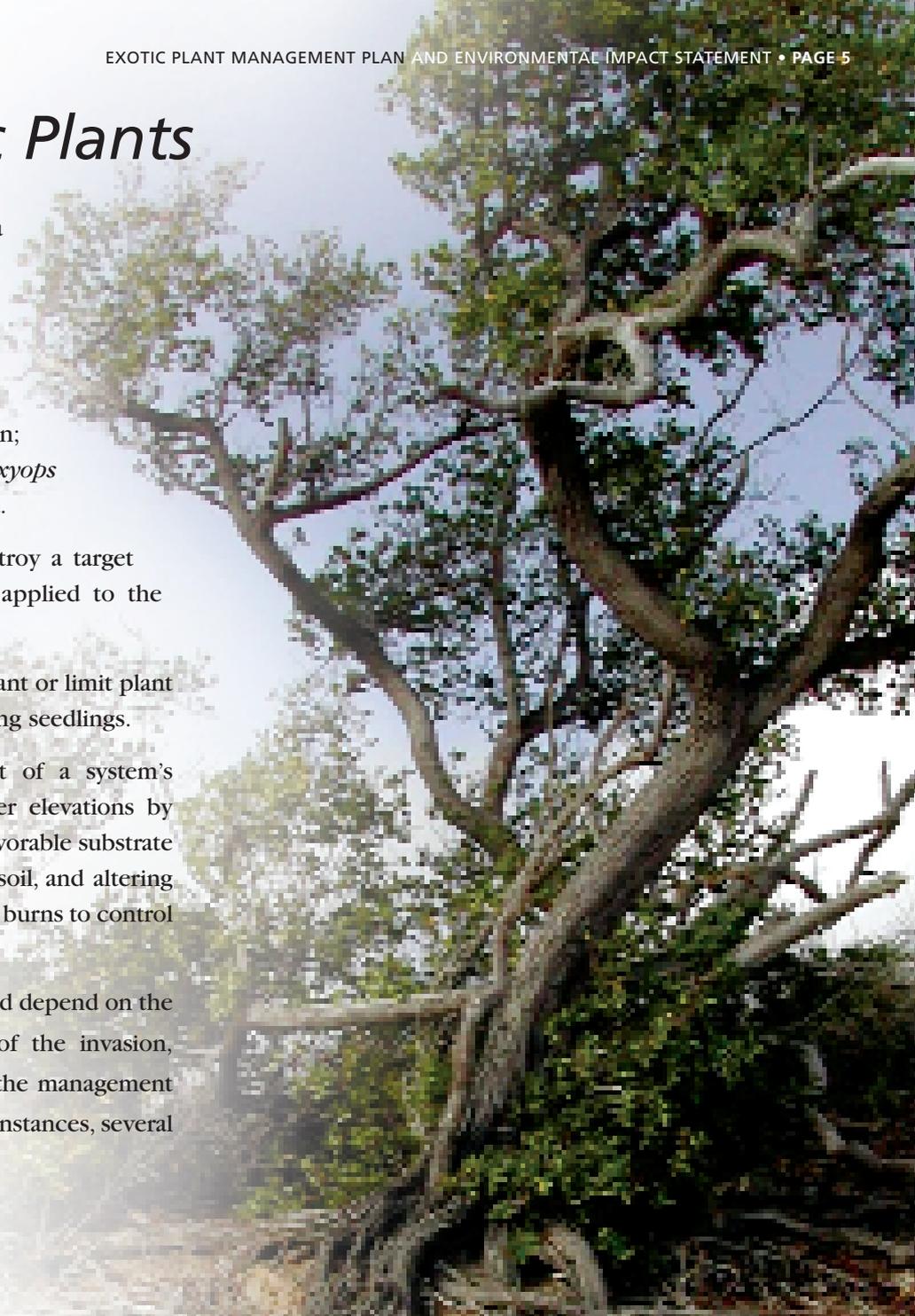
- Restore and protect native plant communities in ways that allow natural processes, function, cycles, and biota to be re-established and maintained in perpetuity.

# Control of Exotic Plants

The National Park Service currently uses a variety of treatment methods to control exotic plants. The treatment methods fall into four categories.

1. Biological controls use a plant's natural predator to control the species' population; one such predator, the snout beetle (*Oxyops vitiosa*), is used to help control *Melaleuca*.
2. Chemical controls use herbicides to destroy a target plant species. These herbicides can be applied to the trunks and leaves to kill the plants.
3. Mechanical controls remove the exotic plant or limit plant reproduction by mowing, cutting, or pulling seedlings.
4. Physical controls change some element of a system's ecology. Methods include changing water elevations by flooding or draining an area, clearing unfavorable substrate by removing and disposing of disturbed soil, and altering fire regimes through the use of prescribed burns to control exotic plants.

The most suitable treatment method would depend on the exotic plant species involved, the nature of the invasion, surrounding environmental conditions, and the management objectives for the area in question. In some instances, several control methods may be combined.



# Preliminary Alternatives

The interdisciplinary planning team is formulating alternative concepts for managing exotic plants in the nine parks. The three preliminary alternative concepts that have been developed serve as a starting point to show the range of strategies currently being considered. The details of these three alternatives and any other alternatives will be developed in future planning sessions. Your input is important in assisting the National Park Service in developing a full range of alternatives to be considered in the environmental impact statement.

## ALTERNATIVE A

### CONTINUE CURRENT MANAGEMENT

Under this alternative, the parks would continue to manage exotic plants using a variety of physical, mechanical, chemical, and biological methods. Currently, much of what drives decisions for treatment is available funds, focusing on periodic treatment to remove exotic plants and then returning to re-treat (maintain) a site so that exotic plants are controlled. A limited number of areas would continue

to be monitored to determine the need to re-treat the area. Parks would continue to rely on return and growth of native plants from native seed sources that naturally establish within the treated site. Monitoring and research would be sporadic to determine longer-term effects of treatment on park resources.

## ALTERNATIVE B

### NEW FRAMEWORK FOR EXOTIC PLANT MANAGEMENT: INCREASED PLANNING, MONITORING, AND MITIGATION

As in alternative A, parks would manage exotic plants using a variety of physical, mechanical, chemical, and biological methods. Alternative B, however, increases planning for treatment proposals so that effects on park resources are efficiently addressed and resolved prior to treatment. Planning would also include a prescribed set of mitigation measures to further protect park resources. Monitoring would help determine if there is a need to re-treat an area in order to control the return of exotic vegetation. Monitoring would also include research on the effectiveness of treatments and the prescribed mitigation measures and the rate of return of native species over the long term. Treatment methods and

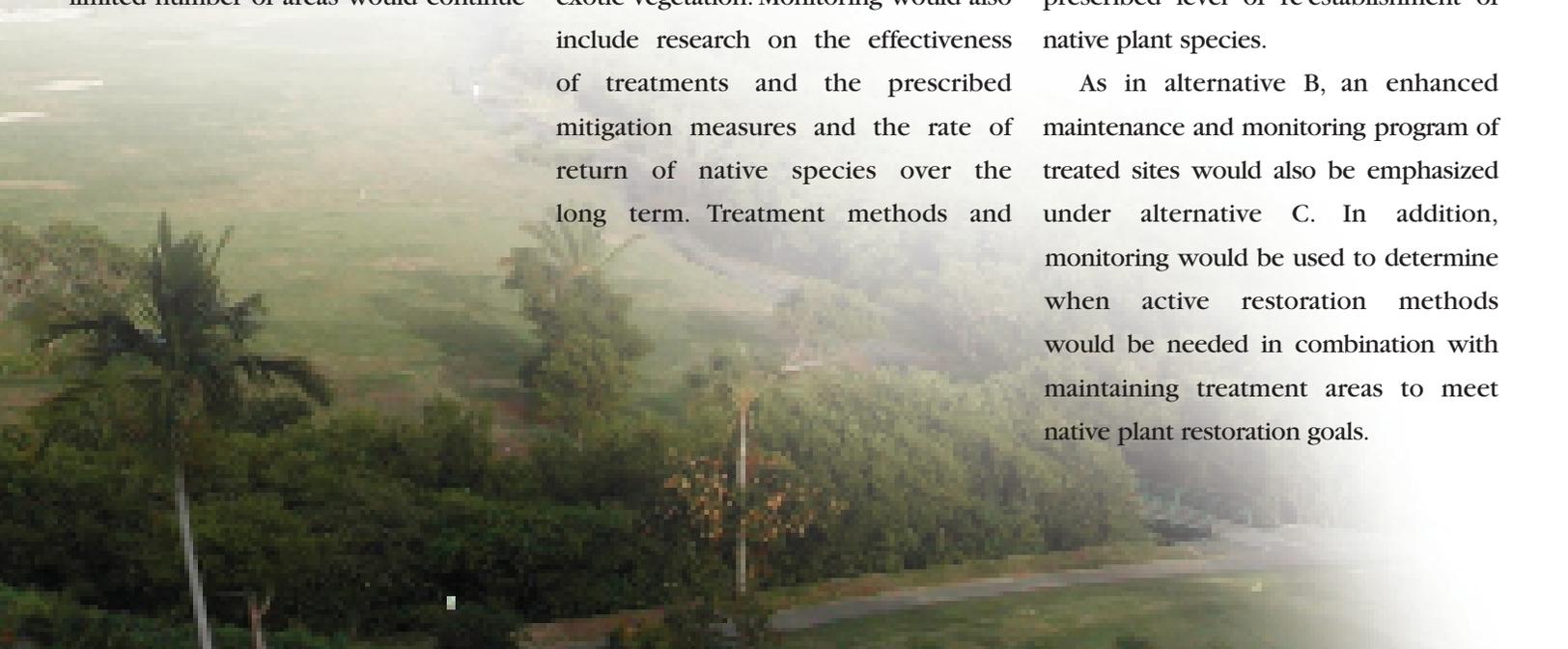
maintenance of treated areas would be adjusted and adapted to achieve long-term objectives to re-establish native plant species; however, parks would not take substantial measures to restore native plants to treated areas.

## ALTERNATIVE C

### NEW FRAMEWORK FOR EXOTIC PLANT MANAGEMENT: INCREASED PLANNING, MONITORING, AND MITIGATION WITH AN EMPHASIS ON ACTIVE RESTORATION OF NATIVE PLANTS

As in alternative B, parks would manage exotic plants using a variety of physical, mechanical, chemical, and biological methods. A new planning framework would be established as in alternative B, but with additional emphasis on restoring native plants. Goals for restoring native plants would be established for each park, and a range of restoration techniques would be prescribed. As in alternative B, parks would use monitoring information to adjust treatment methods to achieve a prescribed level of re-establishment of native plant species.

As in alternative B, an enhanced maintenance and monitoring program of treated sites would also be emphasized under alternative C. In addition, monitoring would be used to determine when active restoration methods would be needed in combination with maintaining treatment areas to meet native plant restoration goals.



# Purpose of and Need for Taking Action

The exotic plant management plan and environmental impact statement will

- Provide a programmatic plan to manage and control exotic plants in nine parks in south Florida and the Caribbean.
- Promote restoration of native species and habitat conditions in ecosystems that have been invaded by exotic plants.
- Protect park resources and values from adverse effects resulting from exotic plant presence and control activities.

The presence and spread of exotic plants threaten the natural and cultural resources in the nine parks in south Florida and the Caribbean. Exotic plants often cause irreparable damage to natural resources, destroying the ecological balance among plants, animals, soil, and water achieved over many thousands of years. Exotic plants are aggressive and competitive and, in newly invaded areas, have no predators to control them. Exotic plants displace native plants by robbing moisture, nutrients, and sunlight from surrounding plants. As native plants are displaced by exotic plants, habitat and food sources for animal populations may also decline, including critical habitat for threatened and endangered species. Exotic plants that interbreed with native plant species can dilute native gene pools. The growth and spread of exotic plants can also change fire patterns and intensities, resulting in

altered ecosystems. The National Park Service spends millions of dollars each year controlling the spread of exotic plants in parks and protecting and preserving park resources.

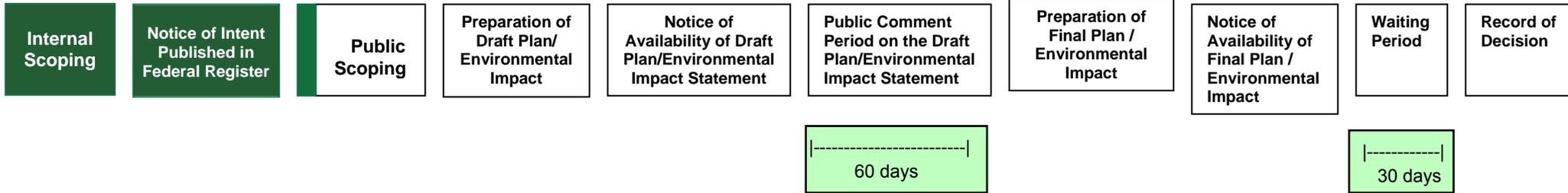
Cultural landscapes are altered by the presence of exotic plants, and excessive growth can threaten the integrity of historic or cultural structures. Activities to control exotic plants can also affect natural and cultural resources. The use of mechanized equipment, chemical herbicides, and physical treatments (such as flooding or fire) to remove and control exotic plants can disturb native habitats, harm native plants, and alter natural communities.

Currently, the parks manage exotic plants within individual parks on a project-by-project basis. The National Park Service recognizes that to manage and control the spread of exotic plants more effectively, it is necessary to use a collaborative approach among parks and to broaden the focus to a landscape scale (such as at the park, ecosystem, or regional level). This comprehensive exotic plant management plan is needed to increase the National Park Service's ability to respond to the threat of exotic plants in an effective, efficient, and timely manner — a plan that meets National Park Service mandates and individual park missions to protect park resources and values.

Mother-in-law's tongue (*Sansevieria hyacinthoides*) causes problems in Florida and the Virgin Islands.

# Where Are We Now? The Planning Process Timeline

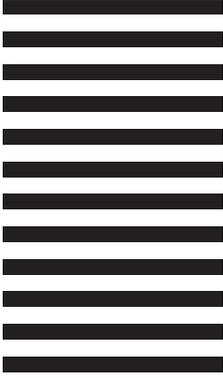
■ SHADED ITEMS INDICATE STEPS THAT HAVE BEEN COMPLETED.





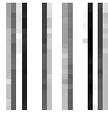


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Please fold this comment form so that the return address shows and tape closed. Do not staple.

You can submit comments using several methods. To be most useful, please submit comments by April 1, 2004.

- You can fold and return this form with your comments.
- You can send a letter to

**Sandra Hamilton**  
 National Park Service  
 Environmental Quality Division, Academy Place  
 PO Box 25287, Denver, CO 80225  
 email: [flca@den.nps.gov](mailto:flca@den.nps.gov)

- You can provide comments at one of the scoping open houses. The dates, locations, and times are listed on page 2 of this newsletter.
- You can submit comments via email to [flca@den.nps.gov](mailto:flca@den.nps.gov).

**PLEASE CHECK THE BOXES BELOW THAT APPLY TO YOU.**

- Keep me on the mailing list for the exotic plant management plan and environmental impact statement.
- Remove my name from the mailing list for this project.
- I will download my own copy of the newsletters and exotic plant management plan and environmental impact statement from the National Park Service website.
- I would like to receive paper copies of the newsletters and exotic plant management plan and environmental impact statement.
- I would like to receive paper copies of the newsletters but a CD (compact disc) of the exotic plant management plan and environmental impact statement.

PLEASE VERIFY THAT YOUR NAME AND MAILING ADDRESS ARE CORRECT ON THE LABEL BELOW, AND USE THE SPACE BELOW TO MAKE ANY CHANGES.

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