



Protecting Public Lands

**Progress in incorporating prevention
practices into agency policy**

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Sequoia & Kings Canyon National Park

Yosemite National Park



Prevention in Federal Agencies



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Prevention in Federal Agencies



Bureau of Land Management

- **1996: issued agency-wide prevention guidelines**
- **includes district-wide prevention schedule**
- **“prevention & public education are the highest priority weed management activities”**



Prevention in Federal Agencies



Forest Service

- 2001: issued agency-wide “Guide to Noxious Weed Prevention Practices”
- risk analysis in planning and maintenance operations.



Prevention in Federal Agencies



National Park Service

- agency-wide minimum ‘Best Management Practices’ will be developed by 2007
- parks are developing and implementing prevention practices
 - Sequoia & Kings Canyon
 - 2004: Superintendent Directive
 - Yosemite National Park
 - 2006: Invasive Plant Management Plan



Overview



- **Construction**
- **Recreation**
- **Pack stations**
- **Wilderness**



Contractors

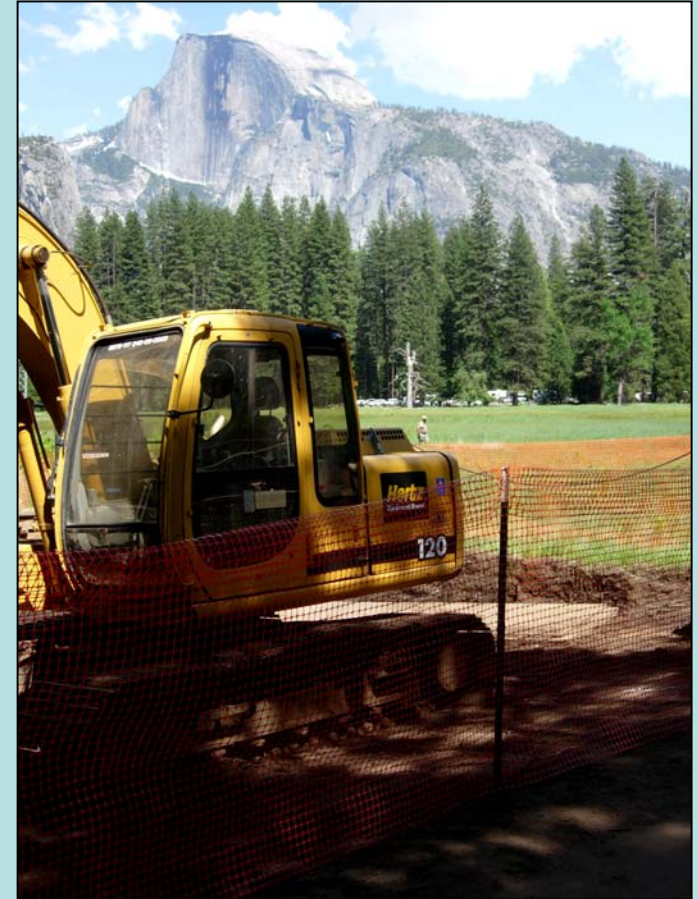


Ideal

- **contract specifications with penalties**

Challenges

- **difficult to determine cause**
- **increases cost**



Contractors



Solutions

- equipment washing
- inspect fill material
- post-construction surveys
 - part of project cost



Source Material



Ideal

- contaminated foreign material not allowed

Challenges

- it's all contaminated
- difficult to assess soil
- low demand for weed-free material



Source Material



Solutions

- post-construction surveys
- risk management
 - depends on where and how



Source Material



El Portal Road Project, Yosemite NP

Vehicle / Equipment Inspection



Ideal

- check/clean all propagule sources

Challenges

- diverse vehicles & equipment
- cost
- inconvenience



Vehicle / Equipment Inspection



Solutions

- **inspect heavy equipment from outside management area**
- **require clean equipment in contract specs**
- **post-construction surveys**

Recreation



Ideal

- certify that shoes, clothing & equipment are weed-free as condition of wilderness permit

Challenges

- permit requirements are already lengthy
- basic requirements are often not followed



Recreation



Solutions

- focus on education
- place information, observation cards, and boot cleaning stations at trailheads to raise awareness

Park News

Sequoia and Kings Canyon National Parks

National Park Service
U.S. Department of the Interior



Non- Native Invasive Plants: A Growing Problem

Cherished features of Sequoia and Kings Canyon National Parks—idyllic meadows, colorful wildflower displays, diverse wildlife—are under attack. A biological wildfire is threatening to destroy what we most treasure about national parks: pristine natural landscapes. Nationwide, non- native plant invasions are sweeping into croplands, rangelands, pastures, forests, wetlands, waterways, wilderness, parks and refuges, and highway corridors. These invaders are causing millions of dollars worth of damage to our natural, managed, and agricultural ecosystems.

Like a wildfire, invasive plants can seriously damage native plant and animal communities, increase soil erosion and sedimentation, and interfere with outdoor recreation. But unlike wildfire damage, which soon heals, the effects of plant invasions can be long lasting and catastrophic. As biological pollutants, invasive plant populations can grow, adapt, multiply exponentially, and spread to unmanageable levels over short time periods.

What Are Invasive Non-Native Plants?

Non- native plant species are those that have been introduced to an area, either accidentally or intentionally, as a result of European settlement. Many of the 509 non- native plant species present in Sequoia and Kings Canyon National Parks don't threaten native plant communities. But at least 78 species in these parks are aggressive invaders that do threaten native ecosystems. Non- native plants often colonize disturbed areas such as campgrounds, trailheads, and road sides. Invasive non- native plants spread rapidly and aggressively from these disturbed sites into adjacent natural communities. Once invasive plants become established, they can be very difficult and costly to eliminate.

Focus on Prevention

Non- native plants are continuously introduced and spread around these parks. Preventing movement of plants is the first line of defense in protecting ecosystems from degradation. It is also the most economical and efficient means of management.

Seeds of non- native plants travel wherever soil is moved: in car tires, bicycle tires, and shoes. Soil, sand, or gravel imported for construction or other management reasons can also contain seeds. Many non- natives have hook- like seed coats and arrive in the park stuck to the fur of pets, wildlife, and pack stock or on people's clothing, shoes, and camping gear. Seeds can blow in from the gardens of neighboring private landowners or can wash downstream in rivers. Hay used to feed horses or straw used in revegetation projects can contain non- native plant seeds from the field in which the hay was grown.

The park is beginning to implement measures to prevent the introduction and spread of non- native plants. To successfully do this, many groups will need to become active and informed, including NPS staff, the visiting public, concessioners, permittees, contractors, and partners.



Yellow star thistle can catch a ride into the park on every vehicle. Photo by J. Asher, Bureau of Land Management.

How You Can Help

Learn to identify the weeds described on the reverse. Check for them around your campsite and as you walk the trails, particularly in more remote areas. Call us with your observation, or ask for an Exotic Plant Observation Card at any visitor center.

Check carefully for mud or seeds in tires, shoes, clothing, camping gear, and pets before entering or traveling within the park. Remove and dispose in bagged garbage.

If you are hiking into the backcountry or wilderness, be extra vigilant about cleaning your shoes, clothing, and equipment.

If you use pack animals, bring only certified weed- free feed into the parks. Maintain this diet for your animals four days prior to entering the parks. Thoroughly brush all pack animals and clean their hooves and gear before transporting them to the parks.

Do not pick flowers or plants. Many wildflowers are actually invasive weeds.

Landscape with plants that won't escape into wild surroundings. Contact your local extension office, county weed control supervisor, land managers, garden clubs, and nature centers to find out about attractive native or non- invasive alternatives.

Questions or plants to report? Contact: Athena Demetry, Invasive Plant Ecologist
Sequoia and Kings Canyon National Parks
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Three Rivers, CA 92377-9651
Phone: 559-565-4479
E- mail: athena_demetry@nps.gov

More information:
www.nps.gov/seki/nrm/nnp/nnp_index.htm

Non-Native Invasive Plants: A Growing Problem • Summer 2004

Pack Stations



Ideal

- must remove manure
- must maintain weed-free grounds
- must use certified weed-free feed

Challenges

- pack stations must be a “viable business”



Pack Stations



Solutions

- pack stations must remove manure
- NPS assists in weed control
- certified weed-free feed will be required when there are 3 local suppliers



Administrative Use of Wilderness



Ideal

- all helispots maintain a weed-free buffer
- shoes, clothing, hose, sling nets are inspected and cleaned

Challenges

- constant vigilance is needed by all



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Administrative Use of Wilderness



Solutions

- education
- start with high risk groups
- post-fire weed surveys



Common Themes



Powerful prevention tools

- **planning cycles**
- **enforceable documents**



Common Themes



Powerful prevention tools

- **planning cycles**
- **enforceable documents**



Photo by Rita Beard

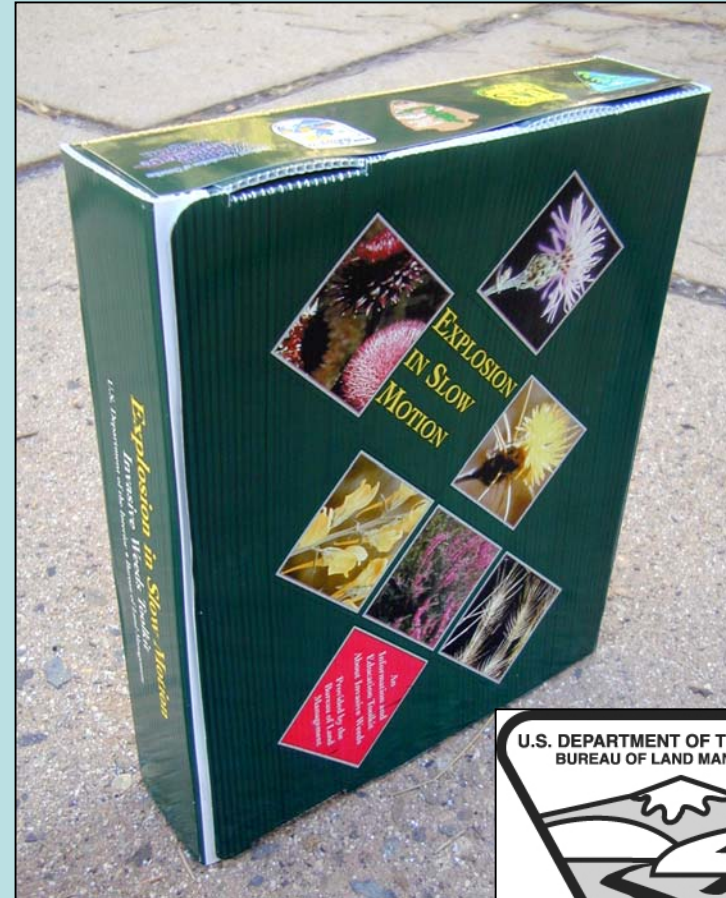
Common Themes



Greatest difficulty when a prevention measure:

- affects others
- requires reaching a lot of people

Education!



Common Themes



Greatest difficulty when a prevention measure:

- affects others
- requires reaching a lot of people

Education!



Common Themes



Prevention measures often fail when they are unrealistic

- **explain purpose & need of measure**
- **listen**
- **work together to find a solution**



Common Themes



Ideal prevention can be time-consuming and difficult

- **prioritize**
- **choose your battles**
- **keep working toward ideal**





Protecting Public Lands

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