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Publication Brief for Resource Managers

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Fire Management and Invasive Plants: A Handbook for Land Managers

USGS research botanist Matt Brooks and National Wildlife Refuges invasive species coordinator Michael Lusk have compiled a handbook titled *Fire Management and Invasive Plants*, with support from the U.S. Fish and Wildlife Service National Refuge System, USGS and the Joint Fire Science Program.

This manual targets fire management staff and is designed to summarize the links between fire management and invasive plant invasions and management, explaining how plant invasions occur, how invasions can alter fire regimes, and how fire can both facilitate and be used to manage invasions. Additionally, it provides general operational guidelines for fire management, plus specific guidelines tailored for the primary stages of fire management: 1) fuels management; 2) fire suppression; 3) emergency stabilization, rehabilitation and restoration; and 4) postfire land use regimes.

Minimum recommendations fall into two broad categories. First, prevent dispersal of invasive plants by:

- Locating fire camps and staging areas in areas relatively free of weeds and other invasive plants.
- Washing vehicles and equipment before and after being used within a project area (e.g., treatment area, fireline).
- Ensuring that any revegetation (e.g., seed mixes) or other organic material (e.g., straw mulch) that is introduced into the project area is certified as weed-free.

Second, minimize resources available to invasives by:

- Removing only enough vegetation to accomplish the management objectives (e.g, creating a managed fuel zone, constructing a fireline).
- Replacing highly flammable vegetation with less flammable vegetation as an alternative strategy to complete vegetation removal when creating a managed fuel zone.

Management Implications

- Fire management activities can significantly affect the establishment and management of invasive plants.
- Simple guidelines applied to fire operations can minimize propagule dispersal and resource availability for invasive plants.
- Integrated management of fire and invasive plants can improve chances of reaching target outcomes for both fire regimes and valued natural resources.

THIS BRIEF REFERS TO:
Brooks, M.L. and M. Lusk. 2008. Fire Management and Invasive Plants: A Handbook. United States Fish and Wildlife Service, Arlington, Virginia, 27 pp.

http://www.fws.gov/invasives
http://www.werc.usgs.gov/yosemite
http://www.werc.usgs.gov/ProductDetails.aspx?ID=4317

When applied correctly, managed fires can be used to control invasive plants such as the Russian thistle (*Salsola* spp.). Image courtesy of M. Weisenberger/USFWS.