Invasive Plant Early Detection

San Francisco Bay Area National Parks

Resource Brief

Above: Invasive creeping capeweed in the Marin Headlands, Golden Gate National Recreation Area. Photo by Jessica Weinberg McClosky.

Below: Invasive plants in the parks are ranked based on how quickly they spread, how much damage they cause, the number of acres infested, and removal costs. The rankings are represented by four different lists; List 1 contains the highest priority plants for early detection and removal efforts.

	Example	Explanation
List 1 (Highest Priority Plants)	Fertile capeweed	Highly invasive and typically not widespread. Control or even eradication is often feasible.
List 2 (High Priority Plants)	Cape ivy	Highly invasive and usually more common than List 1 species, but still feasible to control in many places.
List 3 (Medium Priority Plants)	Sweet fennel	Usually widespread and difficult to control at the park scale, or species of concern that remain scarce.
List 4 (Lower Priority Plants)	Rattlesnake grass	All other exotic plants not in Lists 1 – 3. Typically ubiquitous and beyond control, or rare and unlikely to persist.

Why Are Invasive Plants a Big Deal?

Invasive plants can dramatically alter ecosystems and reduce the amount of habitat available for native plant and animal species. For example, Portuguese broom not only crowds out native species, but also changes nutrient cycling and alters fire regimes. Invasive plants can also negatively impact views, trails and structures.

The San Francisco Bay Area Network Inventory and Monitoring Program has developed an invasive plant early detection protocol to prioritize, find and map invasive plants at Golden Gate National Recreation Area, Point Reyes National Seashore, Pinnacles National Park and John Muir National Historic Site.

What Is Invasive Plant Early Detection For?

- To find potentially problematic invasive plants before they become widely established and while they can still be easily controlled
- To inform park-based eradication teams of invasive plant infestation locations

How Do We Use Invasive Plant Early Detection Data?

- To determine the distribution and abundance of target invasive plant species
- To help measure the success of invasive plant removal activities
- To better understand how different invasive plants threaten local ecosystems
- To re-prioritize which invasive species and sensitive locations are important to target on future early detection surveys
- To determine the primary pathways and factors that lead to new infestations along roads and trails, and inform efforts to slow or prevent future infestations

What Have We Learned?

Since invasive plant early detection surveys began in 2008, NPS staff, interns and volunteers have found invasive plants to be widespread throughout the parks. They have recorded thousands of priority invasive plant populations, many of which were removed at the time of detection or soon after, and discovered invasive plant species new to the parks. Much has also been learned about which species pose the greatest threats. More data is needed, however, to identify trends in the prevalence of invasive plants and determine which environmental factors most influence their success.

To learn more, visit www.sfnps.org/invasive_plants
Summary by Jessica Weinberg McClosky, August 2014.

Above: Early detection intern Lindsay Ringer teaches volunteers to identify invasive purple foxglove. Because of the huge number of invasive plants and locations needing surveys, the early detection program would not be possible without the help of interns and volunteers. Photo by Kevin Sherrill, NPS.