



SUCCESS STORIES



Port-Orford-cedar Base Maintenance Funding

Region 5

SLOWING THE SPREAD OF EXOTIC FOREST DISEASES

A Partnership Between Forest Health Protection and the Klamath National Forest



Figure 1. Dead Port-Orford-cedar along Clear Creek in the Siskiyou Wilderness Area, August 2006.

Port-Orford-cedar root disease has been a major concern since the introduction of the pathogen, *Phytophthora lateralis*, into the natural range of Port-Orford-cedar in northwestern California and southwestern Oregon in the early 1950's. Since that time, the USDA Forest Service has undertaken major efforts to limit the spread and intensification of the disease. A major cause of long-distance disease spread is the transportation of infested soil by vehicles. More localized movement of the pathogen is also known to occur in organic matter in soil clinging to the feet of humans, elk and cattle. Once established in an area, the pathogen can travel downslope in water or in streams and infect and kill large numbers of Port-Orford-cedar in a watershed.

In August, 2006, the disease was discovered in Port-Orford-cedar and Pacific yew in the Siskiyou Wilderness Area, Klamath National Forest. Scattered pockets of mortality were identified along a nine-mile portion of Clear Creek, starting approximately six miles from the Young's Valley Trailhead (Figure 1). Many of the infestations were immediately adjacent to the Clear Creek National Recreation Trail.

Discovery of the disease prompted immediate action from Forest Health Protection and Klamath National Forest personnel. A follow-up trip into the Wilderness Area was done to further identify and define the areas of infestation, while public outreach and education was initiated. Because the pathogen was too well-established to eradicate, the best course of action was to protect the uninfested upstream portions of the Clear Creek watershed, while limiting additional disease spread downstream. A variety of management opportunities were identified and prioritized to reduce the movement of the pathogen by hikers and pack animals from infested areas to uninfested areas along the Clear Creek Trail, including rerouting the trail around infested areas, improving the trail surface and drainage to reduce the movement of infested mud, and removing Port-Orford-cedar and Pacific yew from strategic locations to reduce inoculum levels available for dispersal.



Figure 2. Trail improvement along the Clear Creek Trail, July 2008.



Figure 3. Trail reroute around Port-Orford-cedar root disease infestation, September 2008.

During the winter of 2006-2007, environmental groups, local tribes and other interested members of the public contributed to the overall planning effort. In the summer of 2007, Categorical Exclusion Decision Memos for the implementation of disease control measures were signed and the on-the-ground work began. A ½-acre Port-Orford-cedar/Pacific yew removal treatment at the most upstream infestation was completed, as well as trail improvements in four locations. In 2008, two trail relocations were completed and improvements were made at seven more trail locations (Figures 2 and 3). In addition, a new Siskiyou Wilderness map was completed, with information on the root disease and what visitors can do to help limit pathogen spread. All of these actions will reduce the spread of the disease. Additional trail improvements will be completed in 2009, and future rehabilitation plans include the planting of disease-resistant Port-Orford-cedar.

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