



United States  
Department of  
Agriculture

Forest  
Service

Northern California  
Shared Service Area

2400 Washington Ave.  
Redding, CA 96001  
530-242-2336

---

**File Code:** 3420

**Date:** September 9, 1999

**Route To:**

**Subject:** Doe Flat Trailhead POC Root Disease Risk Factors (FPM Rept. N99-5)

**To:** Forest Supervisor, Six Rivers NF  
Forest Supervisor, Klamath NF

As part of a technical assistance visit to the Six Rivers and Klamath National Forests, John Neisess, John Kliejunas, Dave Schultz (Forest Pest Management), Don Rose (Port-Orford-cedar Program Manager) and I visited the Doe Flat Trailhead on the Smith River NRA on August 26, 1999. Many Six Rivers NF and Smith River NRA personnel also accompanied us, including Bill Jones, Brian Morris, Dave Hubbard and Dave Webb. Several measures are currently under consideration to reduce the risk of introducing Port-Orford-cedar root disease into the area around the Doe Flat Trailhead. In response to a request from Brian Morris, enclosed is my assessment of the relative risk of Port-Orford-cedar root disease introduction associated with the various alternatives. Although the following assessment is fairly subjective, it represents my best estimate of the current situation and understanding of the behavior of *Phytophthora lateralis*, the causal agent of Port-Orford-cedar root disease.

Reducing the possibility of introduction of *P. lateralis* into the Siskiyou Wilderness Area/Clear Creek drainage depends on reducing the intersection of vectors (agents that may carry infested soil, including humans, vehicles and animals), free water and Port-Orford-cedar. Seasonal gate closures have already reduced the risk of fungal introduction to low levels. However, because of the extremely high potential for negative impact should the fungus become established in the Clear Creek drainage, which drains into the uninfested upper reaches of the Klamath River watershed, further actions to reduce the risk of introduction from "low" to "lower" levels are warranted.

At the present time, five alternatives are under consideration:

1. No Action (Current Situation)
2. Current Situation Plus Grading The Trailhead Parking Lot
3. Move The Parking Lot Back 1/4 Mile and Use The Road As The Trail
4. Move The Parking Area Back 1 Mile and Use The Road As The Trail
5. Move The Parking Area Back 1 Mile and Reroute The Trail To Avoid Port-Orford-cedar and Crossings With Doe Creek



While at the current trailhead, we also discussed the potential merit of installing a boot washing station, where people could remove mud from their boots before proceeding down the Doe Flat Trail. While this could be effective, it is passive, difficult to maintain and requires full cooperation by all members of the public. Fixing the trail by placing rock in wet spots and installing water bars to redirect water flow was also discussed. However, because most possible water redirections will end up directing water toward Port-Orford-cedar, it is unlikely that these improvements would have a major impact on the possibility of disease introduction.

In order to get a handle on the comparative effectiveness of the various alternatives that are under consideration, I decided to give my best scientific guess of how well each alternative addresses several disease-reducing objectives, then combined the results into an overall ranking of relative risk for each alternative. The results are presented in the table at the end of this letter.

As discussed above, seasonal gate closures (Alternative #1- Current Situation) have already reduced the risk of *P.lateralis* introduction to low levels. However, more can and should be done. Because Port-Orford-cedar are 100 feet away from the current trailhead location, Alternative #2, which involves only regrading the parking lot, is unlikely to have a significant effect. In contrast, moving the parking area back from its current location (Alternatives 3, 4 and 5) effectively reduces risk levels by preventing vehicles from carrying infested soil directly to the trailhead and allowing an opportunity for mud to fall off of peoples' boots and animals' hooves before they enter the Clear Creek Drainage. The further the trailhead is located back from its current location the better. Moving the trailhead back 1 mile instead of 1/4 mile (Alternatives 4 and 5) not only provides a greater opportunity for mud to fall off boots and hooves, but also reduces the risk of introducing the disease into the uninfested South Siskiyou Fork and the upper South Fork. Because rerouting the trail has the additional benefit of minimizing contact with Port-Orford-cedar, Alternative #5 was given an "Extremely Low" risk rating.

As we discussed in the field, strictly from the viewpoint of the disease, the more that is done to reduce the risk the chances of introducing the pathogen, the better. Alternative #5, moving the trailhead back 1 mile and rerouting the existing trail would provide the greatest reduction in risk of introducing the disease into 3 currently uninfested watersheds.

If you have any questions regarding this input, feel free to contact me at (530) 242-2336 (pangwin/r5, shastatrinity).

/s/ Peter A. Angwin  
Plant Pathologist  
Shasta-Trinity FPM Office

cc: bmorris/r5,sixrivers  
bjones/r5,sixrivers  
dhubbard/r5,sixrivers  
dwebb/r5,sixrivers  
rsvilich/r5,klamath  
jkliejunas/r5  
jneisess/r5  
dschultz/r5,shastatrinity  
drose/r6pnw,siskiyou

**Ranking of Relative Risk of POC Root Disease Introduction Presented by Alternatives for The Doe Flat Trailhead**

	Current Situation	Current Situation, plus Grade parking lot	Move Parking Area 1/4 mile, Use Road as Trail	Move Parking Area 1 mile, Use Road as Trail	Move Parking Area 1 mile, Reroute Trail
<b>OBJECTIVE</b>					
Keep vehicles out of Clear Creek Watershed	N	N	Y	Y	Y
Allow Greatest Opportunity to Drop Mud from Hooves and Boots Before Contacting P-O-C	N	N	N	M?	Y
Minimize Contact with P-O-C	N	N	N	N	Y
<b>RELATIVE RISK</b>	L	L	L-VL	VL	XL

**Key:** N = Objective not met.

Y = Objective met

M? = Not clear if objective met

L = Low Risk

VL = Very Low Risk

XL = Extremely Low Risk

