

# 500 years? Who Has Time for That? Accelerating Forest Succession With Reforestation and the Role of Port-Orford-Cedar on the Rogue River-Siskiyou National Forest

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## Overview:

- Port-Orford-cedar (POC) is endemic to Southwest Oregon and Northern California
- In the 1970s, *Phytophthora lateralis* was discovered to be infecting POC and was killing the trees. This disease is spread through water and soil.
- The Dorena Genetics lab tested samples from the forest to find naturally occurring genetic resistance. They have identified disease-resistant trees and produce seed with a containerized seed orchard.
- Port-Orford-cedar is a significant shade-tolerant species for developing multistoried late-successional forests. Our main objective in Late-Successional Reserves is to accelerate the development of late-successional structure and species composition in Douglas-fir plantations. With other species such as western hemlock or grand fir, as long as there is a good seed source around the harvest, unit enhancement planting is unnecessary; however, with POC, planting of disease-resistant seedlings is needed.

## Summary:

Reforestation on the Rogue River-Siskiyou National Forest on the Powers and Gold Beach Ranger Districts is driven by the need to accelerate the development of late successional habitat in stands less than 80 years old. Prior regeneration harvest emphasized clear-cutting with regeneration of Douglas-fir. Douglas-fir is not a shade tolerant species and will not regenerate naturally under canopy cover. Therefore, to develop a multilayered canopy, reforestation of shade-tolerant species like western hemlock, grand fir, and Port-Orford-cedar is needed. Multilayered canopies provide habitat for many species including the Northern flying squirrel, an important prey species of the Northern spotted owl. To promote long term success of Port-Orford-cedar and its contribution to the late-seral habitat, it is important to plant disease resistant seedlings for long-term success. There is a Port-Orford-cedar seed program at the Dorena genetics lab that produces *Phytophthora lateralis*-resistant Port-Orford-cedar seed. Container and bare root seedlings are grown at the JH Stone Nursery and planted in January/February each year.



### **Silvicultural Concepts:**

- Genetic resistance
- Shade-tolerant species
- Cultivating multicanopy forests
- Accelerating succession

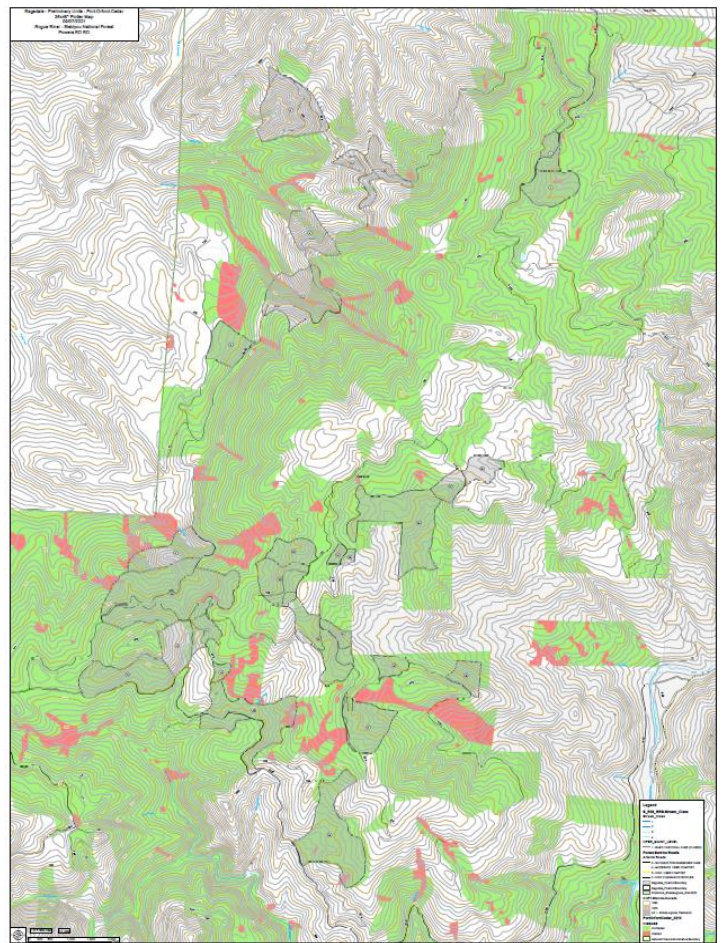
### **Management Applications:**

- Port-Orford-cedar has been heavily impacted by an invasive root disease.
- Our ability to restore late-successional forest conditions depends on our ability to restore native species diversity.
- Restoration of native species diversity is also important for climate change adaptation. Port-Orford-cedar grows on a wide variety of soil types (including serpentine soils) and is important ecologically and economically.





**Figure 1**— Dead Port-Orford-cedar in wet area on the Powers Ranger District.



**Figure 2**— Project area map of Port-Orford-cedar habitat and infested areas.