

Regulating *Phytophthoras* (and Other Non-natives) for Forest Health

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Regulating wildland plant health: a murky topic

- In California, wildland plant health is safeguarded by regulating commercial activities or commercial products.
 - California Department of Food and Agriculture (CDFA)
 - California Department of Forestry and Fire Protection (CAL FIRE)
 - Few if any agencies have direct responsibility for wildland plant protection in the absence of commercial activities. California Department of Fish and Wildlife, California State Parks
- In the country as a whole, some USDA agencies have direct responsibility for wildland plant health
 - USDA APHIS and USDA Forest Service: removal of trees for Asian Longhorned Borer suppression; gypsy moth suppression; etc.
 - Most federal agencies regulate plant health through regulating the movement of commercial products
 - USDA APHIS
 - Customs and Border Patrol

CDFA and APHIS

- In general, USDA APHIS establishes a quarantined area within which plant products are periodically inspected before shipping from state to state
 - In California, CDFA mirrors this for shipments going from county to county
 - County agricultural departments serve as CDFA designees for inspection and compliance
- In general, most important is the condition of the product: BMPs are promoted but specific ones not mandated
- Regulations apply to pests with limited distributions; widespread ones are not generally regulated
- CDFA conducts pest risk assessments to determine level of regulation for specific pests
- The County Ag Department issues compliance agreements under CDFA's authority for out-of-state shipments of *P. ramorum* host material from the forest

Example Quarantined Area: USDA APHIS Sudden Oak Death Quarantine



CAL FIRE

- Environmental protection is done at the forest stand level through stringent regulation of forest practices, NOT through regulating the flow of commercial products
- Zones of Infestation established for specific pests *in theory* enable CAL FIRE to enter properties to abate pests
 - More importantly, they mandate the inclusion of specific BMPs in harvest documents
 - They also indicate seriousness of pest and high priority of managing it
 - California's approach for sudden oak death contrasts with Oregon's
 - How will California's approach to emerald ash borer differ from Oregon once it is detected here?

ZOIs

Declared Zones of Infestation



Bark Beetle (2003)



Goldspotted Oak Borer (2012)



Invasive Shot Hole Borer (2020)



Accreditation Efforts

- Incentives for producers of commercial products to establish and maintain BMPs
- Forestry example: Forest Stewardship Council—additional to CA Forest Practice Rules. Goal: sustainable forestry practices.
- Nursery example: Accreditation to Improve Restoration (AIR)—additional to CDFA and APHIS inspections. Goal: sustainable nursery production practices, particularly to maintain environmental integrity at wildland restoration sites.

Advantages of Regulating Practices

- BMPs can target both native and non-native pests
- Potentially addresses the “too-late problem”: needing to identify and understand the pest before it can be regulated
- “Systems” approach to management starts at the beginning and addresses root causes of pest introduction and spread
- Can help encourage collaborative rather than adversarial relationship between regulator and regulated entity

Disadvantages of Regulating Practices

- It's not enough: products must also be inspected
- Everyone must be educated
- Time-consuming and expensive to develop knowledge and accumulate appropriate materials or renovate existing ones
- Could easily veer into a one-size-fits-all, “my way or the highway” approach
- Productions are continuous, so inspections must be continuous