United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine

Addressing Phytophthora ramorum Regulatory Framework

Continental Dialogue on
Non-native Forest Insects and
Diseases
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Phytophthora ramorum Program: Past, Present and Future Direction

- *P. ramorum* has been a very difficult issue causing concern among stakeholders for a number of years
- Multiple regulatory and scientific meetings, reviews, analysis, consultations with stakeholders, were conducted for the past few years
- Concept paper : Proposed future direction of the *P. ramorum* Program that takes into account all of the information learned during the past several years

Quarantined Counties (pink)

- Trigger is disease in the environment
- All pathways are regulated

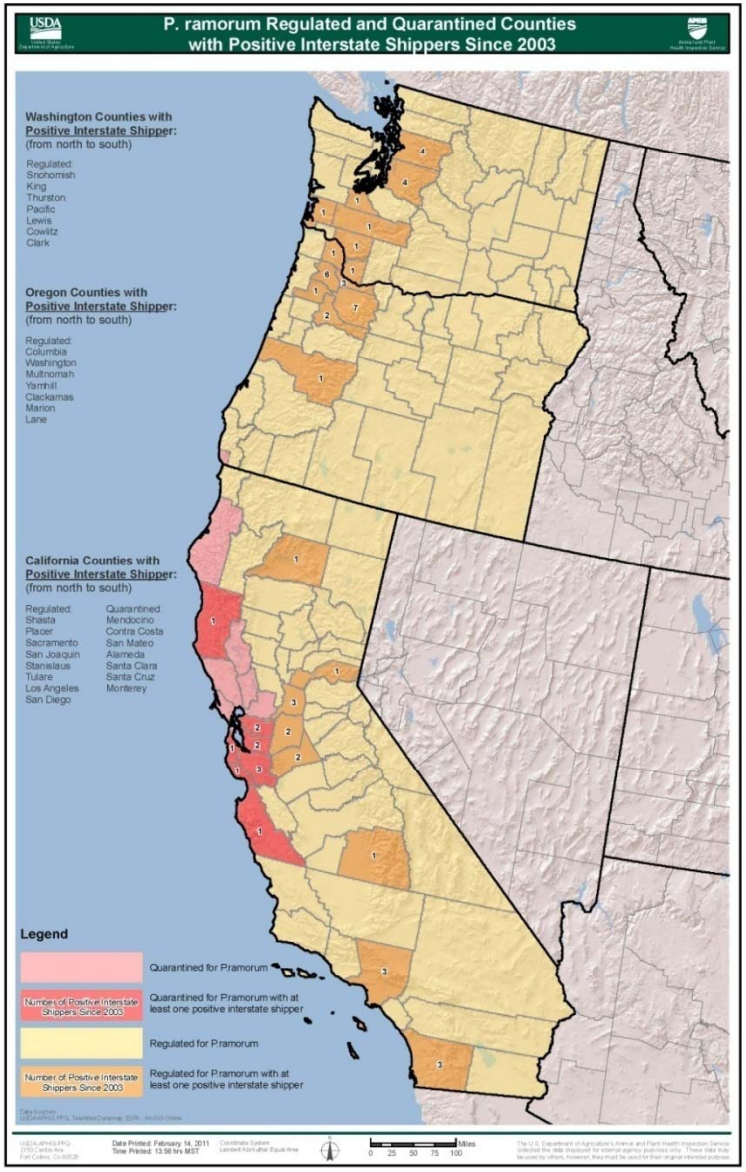
Regulated Counties (orange)

- No triggers exist
- Only nursery stock is regulated

2010 Regulatory Survey - Regulated

State	Total Nurseries surveyed	Host Nurseries Surveyed	Host Nurseries positive for *P. ramorum* (%)	Non-host Nurseries Surveyed	Non-host Nurseries positive for *P. ramorum*
California	2070	634	7 (1.1%)	1436	0
Oregon	1334	644	9 (1.4%)	690	0
Washington	261	142	6 (4.2%)	119	0
	3665	1420	22 (1.5%)	2245	0

Trends were similar in 2007, 2008 and 2009



Counties with Positive Interstate Shippers since 2003

State	Total number of Counties in the State	Number of Counties with *P. ramorum* detections in interstate shippers	Number of Counties with no *P. ramorum* detections in interstate shippers
CA	58	15 (26%)	43 (74%)
OR	36	7 (19%)	29 (81%)
WA	39	7 (18%)	32 (72%)
Total	133	29 (22%)	104 (78%)

Regulatory Survey – Non Regulated

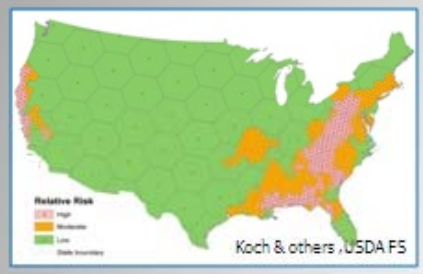
- In 2010, *P. ramorum* stand alone or enhanced survey conducted in 469 nurseries in the non-regulated states and over 3530 plant, 414 water and 63 soil samples tested
  - 9 nursery foliar positives, 2 nursery soil positives, 1 nursery water positives
  - Positive Interstate Shippers (1, trace forward, 1 only water)
- CAPS surveys also conducted in 11 non-regulated states.

Sudden Oak Death Pathogen Found in Eastern Streams

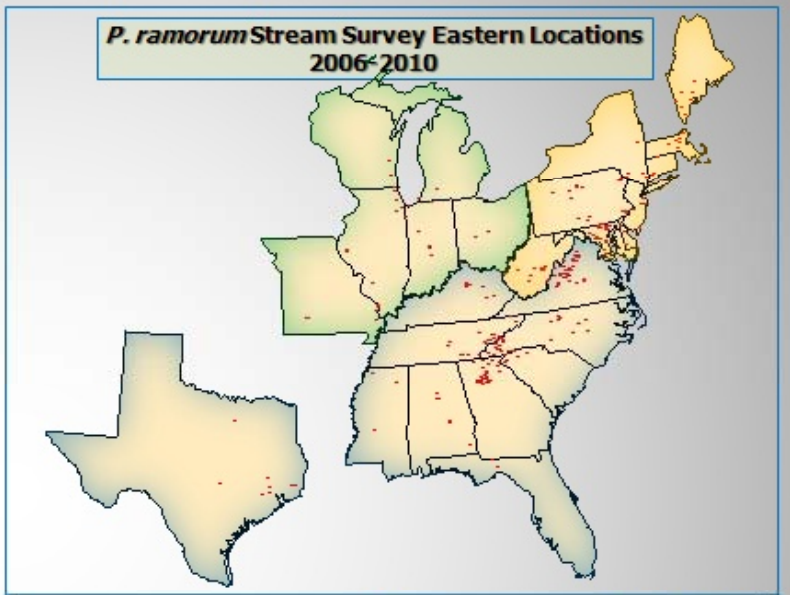
Steve Oak[1], Ed Yockey[1], and Borys Tkacz[2]

[1]USDA Forest Service, Southern Region-FHP, Asheville, NC [2]USDA Forest Service, Washington Office-FHP, Washington, D.C.

Risk projections show eastern forest ecosystems are at risk for Sudden Oak Death



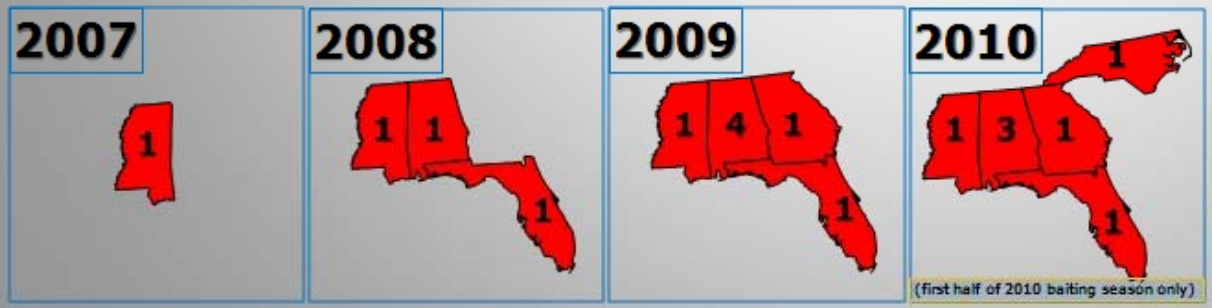
Rhododendron leaf baiting of high risk streams draining infested nurseries has been employed in national early detection surveys since 2006.



Region (States)	Year 2006	2007	2008	2009	First Half 2010	Streams Surveyed Total	Unique [1]
Northeast (9)	24	37	29	15	15	120	91
North Central (6)	0	20	15	0	2	37	30
South (10)	33	64	71	78	73	319	210
Eastern Total (25)	**57**	**121**	**115**	**93**	**90**	**476**	**331**

[1]Many streams baited in more than one year

Are streams acting as pathways for spread of *P. ramorum* into terrestrial forest ecosystems?



The number of streams in states with *P. ramorum* detections are shown by year. Once positive, no streams have reverted to pathogen-free status for an entire year.

A 2008 streamside survey in MS detected positive forest plants, but no established infection center.

Continental Dialogue on Non-Native Forest Insects & Diseases 6th Annual Meeting
Waltham, MA 5-6 October 2010

Soil, Water, Media: Non-Regulated States

State	County	Nursery	2004	2005	2006	2007	2008	2009	2010	2011
AL	Jefferson	HNH*	P	-	P	-	-	P+W	P+	-
	Shelby	JDRL*	-	-	-	-	-	P+W	-	-
	Jefferson	ANDCN*	P	-	-	-	-	-	-	-
GA	Gwinnett	PEXTB	-	-	-	P+SM	-	-	-	-
	Fulton	JDRLA	P(Tr)	P+S	-	-	-	-	-	-
	Forsyth	JDRLCU*	-	P	-	-	-	-	-	-
MS	Hinds	LKYG*	-	-	P+W	P+WM	P	P+W	-	-
NC	Mecklenburg	GOT*	-	-	-	-	P+S	P+M	P+S	-
NY	Suffolk	BST	-	-	-	-	-	-	W	-
PA	Delaware	MTGN	-	-	P+WS	P+WS	-	-	-	-
SC	Greenville	SPN	-	-	-	-	P	-	P+S	S
	Greenville	GOTL	-	-	-	-	P+SM	P+S	P+S	-
VA	Hanover	JRN	-	-	-	-	-	-	S	-
FL	Gadsden	ESPH*	-	-	-	-	P+SW	-	-	-
	Leon	ESPT	P (Tr)	-	P+SW	P	P+M	-	-	-

P: Plant; S: Soil; W: Water; M: Potting Media; Tr: Trace forward detection, Nursery Stream detections*

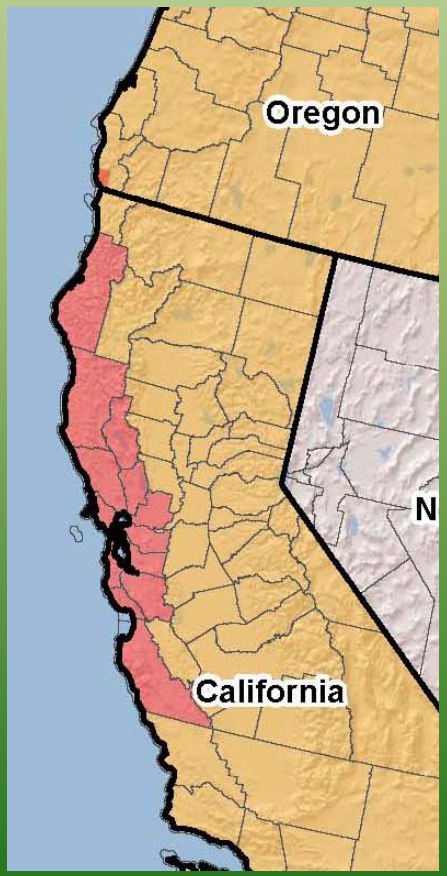
Consistent Themes

- The direction set forth in the White Paper is a culmination of all the input we have received over the past several years.
- Some of the clear messages we have heard include:
  - Regulate the pathogen, not just the disease.
  - Program needs to address *P. ramorum* in water
  - Risk based strategic use of resources to address *P. ramorum* movement in nursery stock nationally
  - Implement a system of voluntary / mandatory BMP's in positive nurseries, especially in repeat positives

Three Major Concepts Proposed

First Concept: Maintain the regulatory status of areas currently quarantined for SOD

- 14 Counties in CA and Curry County, OR
- Would clearly establish triggers for regulating and deregulating



Second Concept

- Regulate the interstate movement of host plants from nurseries that use water that has tested positive for *P. ramorum* as determined through official regulatory samples
  - Based on current data this would potentially impact a few nurseries in CA, OR, WA, MS, AL, GA, FL, NC and NY
  - The regulatory focus would be on “treatment options” of irrigation water.

Third Concept

- Regulate nationally only those nurseries that ship interstate and are also confirmed for the presence of *P. ramorum* in plants, water, soil, or on any related articles
  - Would clearly establish triggers for regulating / deregulating nurseries
  - Detection of *P. ramorum* not only on plants, but also in soil and/or water would be a trigger

Concluding Remarks – Risk Mitigation

- This approach will further reduce risk by shifting program emphasis more towards mitigating the risk within the entire domestic nursery production system rather than in just the 3 currently regulated states.

- This proposed shift would not affect the current quarantine regulations that are in place in 14 counties in California and a portion of the Curry County in Oregon where the disease (SOD) is evident in the environment

- Incentives for the nursery industry to improve disease management

Concluding Remarks - BMPs

- All first time positive nurseries will receive the APHIS CCP/BMP guidance document/checklist and acknowledge receipt when signing the EAN.

- A second time positive nurseries will have a mandatory CCP assessment. Nursery is required to select BMPs to address CCP issues identified in the assessment report. Selected BMPs would be incorporated into the EAN (short term) and into the compliance agreement (long term).

What is process for PPQ rule making, Time lines?

- Consultation with stakeholders
- Publishing the draft rule for public comments
- Respond to the comments
- APHIS paper work process, OGC Review
- Final rule published: 1-2 y minimum

Questions?

Addressing *P. ramorum* finds in Wild lands

- *P. ramorum* is a threat to forest ecosystems of the United States.
- Spread of the pathogen may occur through artificial or natural spread.
  - Artificial from infected nursery stock planted in wild lands or close to a forest – Mitigation feasible
  - Artificial spread via wood, soil, human traffic, greenery, green waste - Mitigation Feasible
  - Natural spread of the pathogen from infected plants and/or soil into water, streams and rivers – Mitigation difficult
  - Natural plant to plant spread of the pathogen spores through air and wind - Mitigation difficult

Addressing *P. ramorum* finds in Wild lands

- APHIS has been tasked with providing a guidance document or response guidelines for *P. ramorum* occurrence in Forest and Wild land Environments .

- Original document “Wild land Protocol” was withdrawn in 2008 due to numerous reasons, key point being lack of clear mitigation methods available and lack of clarity.

- Stakeholders have requested for a guidance document for use by both regulatory and non-regulatory personnel that can be used if and when the presence of *P. ramorum* is officially confirmed in forests, wild land settings or in large water bodies such as lakes, streams and rivers

Current Status

- So far, *P. ramorum* infestation in wild lands in the U.S. has been limited to fourteen coastal counties in California and a small portion of one county in Oregon – Action under current regulation: Area Quarantined

- As of 2010, *P. ramorum* has been detected in streams adjoining nurseries confirmed for the presence of *P. ramorum*, in six (WA, AL, MS, GA, FL, and NC) states – Action: Mitigation within nursery

- No evidence of large-scale pathogen spread from streams on to adjoining vegetation, except in two isolated instances, one in Washington State and one in Mississippi . Action in WA State -: Landscape protocol was applied

Format of the Guidance Document

- Q&A format
- Explain roles and responsibilities of various agencies involved (State, Federal, Tribal)
- Joint responsibility - cooperation from landowners, commercial establishments and local community

Example of Q&A

- **What is the confirmatory process for *P. ramorum* detections in forests and/or wild lands?**
- The detection of *P. ramorum* (PCR or isolation) from soil, water or plant material is considered a suspect positive until it is confirmed by an APHIS laboratory.
- Once confirmed by APHIS, federal regulatory response is triggered however, only when a plant or vegetation is confirmed positive.
- APHIS PPQ is in discussion with stakeholders on how to respond to water and soil detections in wild land areas.

Time line

- Initial drafting of the document with, US-FS.
- Internal PPQ review
- Circulating the draft for comments
- Addressing the comments received
- Will be posted on the web
- Time line Target Spring 2012.

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APHIS PPQ *Phytophthora ramorum* Regulatory Program Contacts

See No Evil

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