

# Workshop on APHIS/National Plant Board *P. ramorum* Regulatory Program Review and USFS Framework for Sudden Oak Death in Wildland Forests

Convened by the  
Continental Dialogue on Non-Native Forest Insects and Diseases  
Address *Phytophthora ramorum* Initiative

February 16-17, 2011

## Flip Chart Notes

### I. PLENARY SESSION – FEBRUARY 16 – MORNING SESSION

#### APHIS/NPB – Questions and Key Issues

- Diagnostic for plant inspection stations
- Water surveys in nurseries – response to positives?
  - Triggers to-be-determined
  - If water finds and can't find source
- Linking APHIS regulations/protocols and USFS Framework
- Survey strategies short and long
- Track related phytophthoras
- Spend time on Q-37 NCEAS study –  $\frac{3}{4}$  plants with symptoms missed
- Link to NPDN
- Where is the regulatory/quarantine authority for forests/midland?
- Need similar/permanent structure for forest community (re: regulations/quarantine)
- Where did/do data on high-risk plants come from?
- States not receiving notifications in timely manner → imports
- International movement of plants – BMP for imports
- Standardized national nursery survey develop

#### USFS framework – Questions and Key Issues

- One of the biggest challenges is reporting
  - How integrate and standardize where get results, categorizing etc.
- What kind of response to positive find?
  - Standardized approach
  - What about water
  - Understory vs. overstory
- Funding
  - Reconciling data (for National Database)
  - Forestry issue – APHIS-USFS coordination across board – ARS, NIFA
- Relation to other regulatory agencies (e.g., USFWS, NOAA, NMFS, BLM)
- Stream water vs. forest
  - Relationship

- Better coordination of relationship – building one with the National Institute of Food and Agriculture

## II. APHIS/NATIONAL PLANT BOARD *P. RAMORUM* REGULATORY PROGRAM REVIEW BREAKOUT SESSIONS

### BREAKOUT SESSION I: HIGH-RISK PLANTS / Q37 / TRIGGERS

#### Triggers

- Strengths
  - Good to have discussion of triggers
  - Examine effectiveness of triggers reallocating \$
  - The maps are useful (more color!)
  - Good data, thoughtful
  - East-West continuity of response
- Gap
  - Doesn't reflect December vision of preventing nursery-wildlands movement
  - How do we use what we know to improve regulations?
    - More attention
  - “Connected to nursery” – define what does it take to be connected
  - Why is the nursery connection treated differently
  - When is it in the environment?
  - Concern focus on individual nurseries or counties is unmanageable
  - Need to focus resources
  - Don't do surveys in non-host nurseries
  - Water baiting as survey method
    - Harder to take care of infected water
    - False negatives
  - Current triggers not working – need to state
  - Is three years long enough to verify? What's the science?
    - 3 is standard
  - Corrections
    - The number of nurseries has not shown steady decline
    - West coast not especially vulnerable = east west equally vulnerable
  - Page 45 – strengthen these are potential impacts
  - Need to summarize chapter
  - To deregulate a state, needs to regulate movement from east potentially infected to west non-infected
  - Corresponding state rules needed

#### Q-37

- Initial Reaction: cost to states of including many more plants in post-entry? need to be considered (NAPRRRA in Q-37)
- Gap: for low volume imports fill out potential impact form
- Identify a process (idea: add high risk hosts to NAPPRRA)
- Gap: AI Matrix – rapid diagnostics – may not work for intended purpose
  - Not as sensitive as other tests (high false negative)

- Import plants at selected PIS – initial reaction
  - → issue of testing accuracy
- Screening at shipping point?
- Initial reaction: A combination of approaches needed (no single one)
- Gap: develop a NAPPRA method with validated assays – a systematic way – not adequately discussed
- Strengths:
  - Page 13 -1<sup>st</sup> rec – right on
  - 2<sup>nd</sup> one addresses our concern
  - Initial reaction: where is highest risk
    - Unknown
    - Inconsistency in imports
  - Can exporters go to 1 PIS?
- Gap: issue anything can come from Canada

### High-risk plants

- Gap: need crosswalk on species at risk – high biodiversity areas
  - What other plants can be affected by intros
  - Don't take plants of less concern off list (could be related)
    - E.g. lilac not on list
- Definition of factors
  - High risk, susceptible, spoliators, rapid spread, movement, epidemiological significance
- Gap: how we have defined high-risk may need more consideration (i.e. true epi significance)
- How many of top 100 are high spoliators?
- Strength:
  - AI #4 standard data collection spot on
- Issue of herbaceous plants – not much attention

### Report Back

- Triggers
  - Strengths : East-West continuity of response, examination of effectiveness of current triggers → reallocation of resources
  - Gap: concern about disparate treatment of detection (def of nursery connection)
    - → What's the risk?
  - The triggers – demonstrate it is science based (3-year standard)
  - Focus on individual nurseries unmanageable
- Q37
  - Gap: more aggressive options to deal with import risk (Eg. NAPPRA)
  - → More to add for systematic process
  - Strength: good data on high risk plant imports
- High risk plants:
  - Strength: High risk definitions need to include factors –
  - Gap: role of trade volume for genera

## **BREAKOUT SESSION II: *P. RAMORUM* REGULATORY SURVEYS / NURSERY ASSESSMENT TEAMS / TRIGGERS**

### **Regulatory Surveys:**

- Role of water
  - Measures different level of infestation
  - Pathway
  - How to measure on nursery
    - Important for East
- Standard sampling methodology
  - Training
  - Interpretation of data
  - All plants - percent inspected
  - Instance of *P. ramorum*
- More data than visual
  - Informative
  - Refine sampling protocol to reflect what's going on in field
- Frequency
- Look at everything together
- When to water sample:
  - Routine
- False and in water?
- More quantitative - percentages
- Gap: Non-host nurseries?
- Results
  - Who shared with
  - Timeline, timely?
  - Reporting?
  - What shared?
- Guidelines on water sampling
  - When, where, share data

### **Nursery Assessment Teams**

- Who to include on team?
- State takes lead
- Include researchers academics
- Communication
- Pre-sampling before NAT look at population, help with tracing
  - Link to trigger → lineage
- What happens after NAT finds something? Assurance to state
  - Tie to national standard survey
- Guidance/standard for tracing

### **Triggers**

- Why differences between nursery and forest find?

- Risk – regulate nursery based on risk
- What if state does nothing?
- What should state do in response to positives
- Nat'l standard or deregulate to the states?
- Nursery next to infected forest & vice versa – regulate the pathogen
- New lineage introduction
- Nursery's market – who where selling to?

## Report Back

- Triggers:
  - Question of nurseries next to susceptible forests – treated differently?
  - National standard when 50 different states
  - Regulate the pathogen
  - Repeat positive nurseries
  - Water? Trigger plant survey
  - New lineage → new response?
- Assessment Teams:
  - Standardized national survey
  - Complete protocol, include response
  - Communication of results
  - Researchers
  - Sample populations
- Regulatory Survey:
  - Standardized national survey
  - Sampling meth and data collection
    - Plants, soil, and water
    - Number of plants in the nursery, the number sampled, and the number found positive
  - Reporting –
    - What?
    - To whom?
    - By when?

## **BREAKOUT SESSION III: TRIGGERS / CRITICAL CONTROL POINTS AND BEST MANAGEMENT PRACTICES / REGULATORY PROTOCOLS**

### Regulatory Protocols

- Gap: Wildland protocols
  - Interested in next steps
  - Resolving questions of legal authority
- Gap: Tracebacks – inspections often neg.
  - What if have multiple tracebacks to same nursery
  - Result could be mandatory assessment
- Frustrating for growers due to much comingling – esp. retail nurseries
  - BMPs/CCPs could help (90%)
- Gap: resolve contradiction/inconsistency

- Stream positive vs. nursery positive
- Resulting mitigation/action?
- Monitoring? (seasonal)
- If found in water sources (nursery), some treatment protocol
- Landscape stream vs. stream used for irrigation
  - Notification if there is a find
- Protocols to minimize risk that adult streams are positive
- Treatment re: pond positive – if used for irrigation, on nursery property vs. stream
  - Need clarification regarding authority
  - Have levels of noncompliance eg. Critical, noncritical like USNCP
  - Repeat positive nursery
    - Mandatory – within 7 days latest (mandatory assessment)
  - BMP implement – 3<sup>rd</sup> party verify before nursery released
  - Landscape protocol –
    - Positive associated with nursery
    - How define/what distance? Or other traits eg. Leaf, soil, H<sub>2</sub>O, etc.
      - Wildland vs. Landscape associated with nursery

### CCP/BMPs

- BMPs for retailers needed to prevent movement
- Rules about how to make a plan/BMP vary west-east
- Involve nursery assessment team in creating BMPs, identify proactive CCP and BMP as well as in response to positives
- Need for BMPs in wildland for landowner (including agencies)
- Forest stewardship certification?
- Gathering data, including current state of BMPs/CCPs already in place
- Creating a culture, work through industry to ensure educated prepared – proactive opportunities
  - Identify incentives
- “Certification” / distinction among nurseries
  - Gold/silver standard with different options (eg. Waive pre-notification?)
- Understanding forest v. landscape vs. nursery site – eg. Urban forest
- Need way to require/have both - carrot and stick
  - OR and CA nurseries get annual inspection – including practices
  - Way to talk to “laggards” as well as leaders and understand practices, how to “sell” BMPs
  - Difference between regulated and nonregulated areas)
- Sensitivity regarding prevention – against what not whom
- Train inspectors – to inform nurseries re: opportunities and consequences
  - Address the spectrum
- Urban-residential interface
- NFDN rapid response – master gardeners
  - For all cases need to memorialize BMPs in single document
- Terminology: (see Jenny/Karen ppt)
- Towards harmonization program?
  - Need to prioritize where use resources (eg. BMPs, protocols, etc)

- Be mindful of what states can/will do
- Opportunities to collaborative/leverage
- Composting standard – clarify language
- If have “gold standard” for interstate shipping – could it apply to multiple pests/pathogens?

### Triggers

- Definition of close proximity to a nursery – including foliar, as well as twig/stem/trunk
- New environ find – trigger quarantine of county unless action taken to restrict area
  - Need parameters/guidance for plan
- Guidelines of time how long is good enough? (if there is a stream find) to find source
- Presence of P.ram – isolated finds (eg. Salal finds) protocols diff
  - Consider risk...
    - Spread to other plants/waterways
    - Distance from source to downstream find (same instance)
    - Proximity – not just to source, but to risk of escape/spread
  - State v. fed quarantine
    - Authority and liability
- Lessons for P.ram
  - Eg. Black stem rust
  - Extent of resources for program
  - Distinguish between P.ram finds – in terms of response/action
  - Prioritize – genotyping full v. NA2
- Not just risk to east, don’t give up on west

### Report Back

- Good start
- Protocols
  - Unresolved issues:
    - Tracebacks
    - Streams/water finds
    - “proximity” definition
    - Need for wildland protocols (as appropriate)
  - BMPs for repeat positive nurseries
    - How to implement
- CCP/BMPs
  - Need carrots (broccoli) to support proactive measures (learn from “nonbelievers”)
  - Urban forest/wildlands connection
  - BMPs for retail nurseries
- Triggers:
  - Define proximity
    - Guidelines for environ finds (how long do you look?)
  - Defining/differentiating finds based on risk
  - 3-legged stool:
    - Regulatory
    - Voluntary
    - Outreach

### III. PLENARY SESSION – FEBRUARY 16 – APHIS/NPB PROGRAM REVIEW

- Q37 - Like NAPRA idea
- Put onto restricted/prohibited plant list (mandatory quar)?
- PEQ (would need to change Q37)
  - Cuttings may be a challenge
  - Have initiated discussions in APHIS
- High Risk Plants
  - Broad host range
  - Broader regulation perspective
  - Could be useful for *P.ramorum*
- Standardized data collect protocols especially re inspection/sampling and results
  - Started with all finds to get High Risk plants
  - Iterative process evolving → epidemiology
- What about the 85 – Koch’s Postulate? Associated hosts
  - Not directly finding research on this
    - If encounter, inform the program
  - Koch’s Postulate - need other info for decision making
- Should prioritize resource allocation
  - Eg. Research
- Survey
  - Standard protocols for survey needed
  - Trespassing issues – for regulators and researchers
    - Non-regulators need permission
    - Info sharing re: findings
- Assessment Teams
  - State by state choice
  - Would like broad expertise, including industry rep.
  - Feds need invite from the state
  - Invited and REG/CCP assessment team
- Protocols
  - Tracebacks - multiple finds related to a nursery/site
  - “Brokers” hard to trace/track
    - Big challenge needs to be addressed
    - Define ownership (eg, 30 days in CA)
- BMPs/CCPs
  - Second find = regulated BMPs
  - Mandate v. proactive
    - How encourage proactive adopt of BMPs
  - “High Risk” growers/nurseries
    - CDFA survey – talk to these nurseries and see whether employing BMPs?
  - Initial assessment re: BMPs being used?
    - By regulators
    - From state inspectors - when there’s a find
    - Prevent recurrence
    - Could be part of or National survey comprehensive agreement



- BMPs
  - One time survey re: BMPs? (see OR example)
  - PA regional meetings
    - Continuing education credits/ trainings/ presentations w uniform message
- Triggers
  - 3 year std for ...
  - 2 year for some insects > BMPs for protocols
  - Consider requirements for water exiting nursery – but must ensure not masking
    - Could test then treat
      - Water is monitoring tool
    - Careful re: treatment recycling / water vs. runoff
    - Black stem rust...lessons learned
      - Relatively successful with low resource input

#### **IV. USFS FRAMEWORK FOR SUDDEN OAK DEATH IN WILDLAND FORESTS BREAKOUT SESSIONS**

##### **BREAKOUT SESSION I: PREVENTION / DETECTION / RESPONSE / WILDLANDS PROTOCOL**

##### **Key Gaps**

- Prevention: eg. Outreach – re: nursery purchases, nursery inspection etc.
  - Very important
- Overarching / response
  - Clarification re: authorities, funding, involvement – intra/inter
    - Graphic – decision tree/”what-if”
  - Wildland response protocol
  - APHIS...USFS...States

##### **Response**

- Get input land management from other agencies
- See “partner roles and responsibilities”
  - Very important section and communication on roles/resp at all levels
    - Monitoring aerial surveys
      - Continuing providing to partners
  - Must consider NEPA/fed as well state regs
  - Interstate: USDA
  - Intrastate: state regulator
- What about non regulated area, interstate shipper positive, no known source?
- Triggers group: worked on a protocol/map: could inform detection approach
- Who takes over outside nursery perimeter? State/county unless compliance agreement)

##### **Detection**

- Stream baiting approach,
  - More/different systematic approach
    - Eg. Grid system

- How do we know where to look
- National survey – 1/2 near nurseries, 1/2 elsewhere
- Overtime – spread sampling – different watersheds
  - Continue upstream with monitoring

## Report Back

- Overarching
  - Decision tree / clarify authorities
  - Clearly defined roles and responsibilities
  - Could inform because precursor to wildland response protocol
- Detection
  - National survey approach
  - Consistency standardization in survey monitoring and reporting
- Response:
  - Triggers, specific, systematic approach to traceback stream positive
  - Question: who takes over outside nursery perimeter?
  - Once find source-extreme containment
- Prevention
  - Who's in charge of keeping *P.ramorum* out of wildlands?
  - Incidence command system – consider prevention needs funding

## **BREAKOUT SESSION II: RESPONSE / MANAGEMENT / RESTORATION / WILDLANDS PROTOCOL**

### Overarching

- Detection not linked to nursery – used residential protocol
- Why is authority an issue re: *P. ramorum*?
- Can institute a quarantine if necessary
- → State or APHIS can quarantine
- → Some flaws in CFR, APHIS trying to fix, write interim rule, will revisit
- Gap: need protocol for deregulating part of a county
- → OR and CA different approaches
- Need Guidelines from APHIS
- Send edits to RESOLVE, APHIS
  - Lines 8-20-NPB Carl will submit changes to Rob Bruce
  - Page 7 BMP Sanitary Guidelines – Implementation
  - Suggestion - Part of sustainability certification
  - Initial reaction: Delimiting – Keep it broad
  - Page 8 line 5 add “other detections made visually” (take out “stream”)
  - Page 8 – What is containment? Flesh out activities
  - Page 8 line 10 – add “APHIS and states”
  - Outline “gang of four” state forester
  - Page 9 – Coming up with EISs
  - Can address environmental analysis better here
  - Tribal consultation be sure to include
  - Need to have agencies on board before incident
  - Page 9 – include EPA

## Management

- Coordination, EISS – issues to include
- What action to take to minimize impact, risk of spread?
- Impact of management plan on quarantine
- Need team in place – incident command system for deal with pests that emerge
- How to manage once impacted? E.g. fire practices (e.g. foot-cleaning stations)
- How to manage in east?

## Restoration

- Research on best plants to restore
- Collaborate with tree breeders
- Who pays for containment/management/restoration?
- →Who pays initially?

## Report Back

- APHIS document
  - How to deregulate part of a country
  - Re: wildland finds – add cooperation with USFS, state foresters
- Wildlands protocol is coming soon
- USFS response:
  - Early coordination with all involved (state foresters, tribes)
- USFS management
  - Coordination is key in wildlands situation
  - Be ready – have team in place (incident command system)
    - →conduct exercises
- Restoration
  - Is there opportunity for resistance in existing plants?
  - What can be done to restore?
  - Who pays initially?

## BREAKOUT SESSION III: RESEARCH/ OUTREACH / WILDLANDS PROTOCOL

### Wildlands Protocol

- Reinstate the Wildlands Protocol
- Q:2m buffer in landscape protocol
- Q: 2-3 year timeframe – too short for wildlands
- \*5 years? As long as in water?
- Take into account W-E landscape differences
- What sampling?
- Risk – proximity to high density human population
  - Stream sampling downstream
- Prevention./Mitigation v. Response
- Does proximity to nursery make different type of “find”
- What jurisdiction does APHIS have when there is a wildland find

- How to show success for prevention
- Public and private land access
- How to determine if actionable event
- Stream find v. understory v. overstory find
- Authority? NPS land, BLM, National Forest
- Recognize hosts from overseas (Japan larch)
- Policy changes announce

## Research

- Research section is needed
- Parameters for what is actionable
- Eastern US climate hosts
- Research needs assessment
- Work with FS research, ARS, and NIFA, to develop a research section – w/state and university researchers
- Data is made public – timely if publically funded research
  - What should be public and shared?
    - Location
    - Species
- Compilation of data
- Rapid detection
- Risk at watershed level

## Outreach

- Announce policy changes
  - What is “policy”?
- California Oak Mortality Task Force reporting model worked
- Public meetings (encouraged)
- More proactive
- Encourage citizen science
  - Forest health citizen monitoring
  - Sentinel plant network
- Keep in news → encourages funding
- Media attention – papers, incidents
- Powerpoints, language to fold into presentations for public programs
- Don’t scare too much
  - Make helpful science based
  - Publicize good new
  - Resistance → publicize new information
  - Audiences – make sure all get info they need – tailor info
  - Who delivers the information?
  - “Filthy 5” – different term

## Report Back

- Wildlands protocol needed
  - (wildlife), plantations, urban wildland interface, stream and stream buffers, area scales large small, remote, follow up surveys
  - Emphasize risk based aspect
  - Actionable and triggers for action
  - Science-based
  - Recognize hosts from overseas
  - Authority question on types of land
  - Incident command
- Research Needed in framework
  - Eastern risk research
    - Phytophthora: field diagnostic kit
    - Watershed level
    - Climate
    - Host species
  - Multi-organization, multi-disciplinary team
    - Develop and implement
  - What is actionable
  - Public access to data
    - Data sharing and collection
- Outreach
  - Announce policy changes: what is a policy?
  - Media attention
  - Engage public (meetings, citizen-based)
  - COMTF reporting model
    - Use existing materials, adapt
  - Audience
    - Who? Messaging

## V. PLENARY SESSION – FEBRUARY 17 – USFS FRAMEWORK

- Response plan protocol for states
  - Communication/education about plan
  - Quarantine – forever?
  - Activity – take existing protocol and do science review (state department agriculture CCA), committee (Russ, Susan)
  - Guidelines: “marriage” of wildlands protocol and framework
  - Recovery or response
  - NPDRS – ARS model white paper Kent Smith
  - Review committee WA, OR, CA, with tribes
- Wildland protocol
  - Articulate desired end state/outcome
  - What’s success look like?
- Response: formal ICS

- Unified command
- Modify for *P. ramorum*/invasives
- Types of responses
- Recent tabletop exercise
  - Multistate (grey)
  - National template (WAASF) – Carol H.
  - State strategy assessment – Tom

## VI. PLENARY SESSION – IMPLICATIONS AND NEXT STEPS

- Dialogue involvement in national strategy scoping preplanning
- Linking nursery - wildlands
- Coordinating among groups (nursery, forestry, etc.)
- Lessons learned document (from western experience)
- Targeting areas for reconsideration
  - Risk areas for survey
- Get more active involvement of state foresters
  - Communication link
- Continue communications/ sign up for initiative? Phone webinar
- State and natural heritage program – involved in wildland protocol
  - Extension land grants
- Protected species
- Tribes
- Master Gardeners/Naturalist – CA training
- Hobbyists (eg. Rhododendron Society)
- American Public Garden Association
  - Training modules
  - For gardeners to deliver to public
- Dialogue with landowners
- Keep pressure on re: funding
  - Sustaining reasonable funding
  - Email faith to join initiative
  - “joint ask”
- Nursery BMP Survey (National)
  - Identify models consider how to implement – to understand baseline
  - Consider funding options and target participants
- Package of best practices, carrots/sticks
- Agencies use APR Initiative for communications re: updates/metrics/timelines/
- Invitations to regional meetings
- Foresters – chair of forest health committee – invite to NPB?
  - Encourage state foresters
  - Michael Bud interface/help identify participants
- Ideas for October 5-6 Dialogue meeting