

**CONTINENTAL DIALOGUE ON NON-NATIVE FOREST INSECTS & DISEASES
FIFTH DIALOGUE MEETING
OCTOBER 27-28, 2009**

Meeting Summary and Action Items

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NOTE: Presentations and attachments (including the meeting agenda, participant list, flip chart notes from the breakout sessions, and a roster of Dialogue Steering Committee members) are available online at the following URL:

<http://www.continentalforestdialogue.org/events/dialogue/2009-10-27/presentations/index.html>

I. Overview and Background

On October 27-28, 2009, a diverse group of representatives from state, federal, and municipal agencies; private business and industry; academia; and non-governmental organizations gathered in San Francisco, California for the fifth meeting of the Continental Dialogue on Non-Native Forest Insects and Diseases (the Dialogue). The meeting was convened by the Dialogue Steering Committee, a cross-section of stakeholders with an interest in protecting forests from the threat of non-native insects and diseases.

The goal of the October 2009 Dialogue meeting was to advance collaboration around actions to address the threat of non-native forest insects and diseases. Specific objectives included:

- Cultivate collaborations toward action to address the threat of non-native forest insects and diseases;
- Link state and local actions to Continental Dialogue efforts to enhance national policies and strategies;
- Enlist communities in the battle against non-native insects and diseases impacting their trees; and
- Identify and agree on needed actions for Continental Dialogue to take in the upcoming year.

II. Day One – Tuesday, October 27, 2009

A. Field Trips: Sudden Oak Death and Port of Oakland

Activities of the 2009 Continental Forest Dialogue meeting began early on the morning of October 27, ahead of the plenary sessions. The San Francisco Bay Area provided the Dialogue with two exciting opportunities to experience Dialogue issues first hand. Approximately seventy-five Dialogue participants attended two concurrent field trips. The majority of the group visited the National Ornamental Research Nursery at Dominican University of California (NORS-DUC), in San Rafael, to understand the groundbreaking work of the new venture. The group then toured Muir Woods to witness the effects of Sudden Oak Death (*P. ramorum*). At the same time, a smaller group visited the Port of Oakland to learn how the Department of Homeland Security (DHS) Customs and Border Patrol (CBP) inspect incoming cargo to the United States to mitigate the introduction of non-native insects and pests by way of containers and wood packaging. Upon completion of these two field trips, the groups returned to San Francisco and incorporated their observations and learning to the plenary sessions.

B. Welcome and Opening Remarks

Paul De Morgan, Senior Mediator with RESOLVE, welcomed the participants to the meeting and asked Steering Committee members in attendance to identify and introduce themselves. Mr. De Morgan drew attention to the participant list and Steering Committee roster to help the large group identify existing colleagues and new contacts. Mr. De Morgan reviewed the agenda and ground rules for the meeting before introducing the opening speaker, Ms. Heather Fargo.

Heather Fargo, former mayor of Sacramento, California, delivered opening remarks and spoke to the Dialogue about how its work relates to the State of California and the western region of the United States. Ms. Fargo reviewed the assets and vibrant setting of the Bay Area along with the challenges faced by the region and the State of California. Ms. Fargo pointed out that 80% of Californians, across the political spectrum, feel that California is going in the wrong direction and her way of working to effect change is by working with California Forward, a reform group focused

on legislative budgeting and oversight. Ms. Fargo also founded the Sacramento Tree Foundation, a nonprofit 501c(3) organization dedicated to building the best urban forest for the Sacramento region.

Ms. Fargo emphasized the important role the Dialogue can play in making a difference around forest health as it relates to climate change, soil erosion, air quality, shade, and food systems. She focused on the scientific and technical nature of Dialogue content, and recommended that the group find ways of translating, either directly or with assistance, the subject matter of its work so that lay audiences can engage with its important content. Ms. Fargo explained that the Dialogue’s substantive content must be translated to garner the support of politicians who control funding for projects and initiatives. She urged the group to think about how it makes the populace aware of what it does, with a particular emphasis on how forests and trees are part of the solution to climate change and quality of life issues.

C. Orientation to the Continental Dialogue

Frank Lowenstein, The Nature Conservancy (TNC), a member of the Dialogue Steering Committee, followed with an overview of the vision and goals of the Dialogue (http://www.continentalforestdialogue.org/documents/Continental_Forest_Dialogue_Vision_and_Goals.pdf), along with Action Agenda Opportunities and the efforts and products of the Workgroups. He explained that the Dialogue is an informal collaboration of people from all walks of life and the economy, brought together by the common goal of protecting trees from the threat of non-native insects and diseases.

By way of example, Mr. Lowenstein reviewed a number of specific threats and the potential economic damage they can wreak; the Sirex woodwasp, in the northeast U.S. and Canada could cost \$55 billion while the Asian Longhorn Beetle (ALB) could cost \$669 billion. These are just two examples of the at least 170 non-native insects and diseases in continental North America, seventy of which have significant economic impacts. In order to combat these threats, he explained that the Dialogue acts as a vehicle for collaboration; the recurrent guiding metaphor amongst participants is that of an airport, with flights coming and going. Dialogue participants arrive at the airport voluntarily and travel where they want to with respect to issues and activity. Dialogue progress depends on participant and Workgroup initiative, ideas, and energy. Mr. Lowenstein explained that one central aim of the Dialogue is to make people aware that the non-native pest and disease issue exists, and help them understand it as a unified issue. He cited the Don’t Move Firewood campaign and website as a flagship effort, along with the release of “Lurking in the Trees,” a documentary on the Asian Longhorn Beetle in Worcester, Massachusetts. The Dialogue seeks to influence decision-makers through letters and visits of members to Congress, the leadership of the Animal Plant Health Inspection Service (APHIS) and United States Forest Service (USFS), political appointees, Office of Management and Budget (OMB), and the Obama administration.

D. Introduction to Pathways in the West

The 2009 meeting was the first Continental Dialogue meeting to take place in the western United States. The City of San Francisco and Fort Mason Center provided a picturesque physical setting for the meeting. **Steve Seybold**, United States Forest Service (USFS), Pacific Southwest Research Station framed Dialogue issues in a substantive regional context by delivering a presentation on the history of non-native insect pathways in the western U.S. Beginning with an overview of western

forest insect groups, Mr. Seybold described the typical feeding groups of forest insects in the west; main tree system, roots, foliage, twigs, branches, seedlings, and finished wood products. The most damaging of these being attacks on main stems and roots. He then reviewed the history and pathways of the west by naming a list of twelve taxa introduced in the last ten years.

Mr. Seybold pointed out that there are fewer insects in the western U.S. than the in the east. He named ten known pathogens of the last hundred years, and referenced nursery stock and solid wood packaging as the two largest traditional pathways. Mr. Seybold explained the role that the Great Plains plays in acting as a buffer between insect movement between the west and east. He also stated that biodiversity is a result of geographic isolation. Mr. Seybold moved on to themes and trends:

- trend one – the simultaneous manifestation of non-native species at multiple locations;
- trend two – increasing numbers of species sharing a common host; and
- trend three – diseases interacting with insects.

Mr. Seybold concluded his presentation by noting that ecosystems are always changing, and human interaction with them accelerates change. He noted that invaders are starting to interact with one another, and the successful banning of pathways requires discipline and overwhelming oversight.

E. Panel #1: Impacts of Firewood Movement and Efforts to Reduce Impact

A significant portion of the meeting was used to hold five panel discussions on various topics related to the work of the Dialogue. During each panel, panelists delivered ten-minute long presentations, followed by facilitated discussion to integrate the content and provide time for questions. The first of the panels focused on the impacts of firewood movement and efforts to reduce those impacts. Four panelists presented on the issue. A short synopsis of each presentation is below, followed by the facilitated discussion that unified each segment. If presenters utilized PowerPoint slides, their presentation can be found on the Dialogue website (<http://www.continentalforestdialogue.org/events/dialogue/2009-10-27/presentations/index.html>).

Rocky Mountain Perspective

Bill Jacobi, Colorado State University, provided an overview of a study he is conducting which examines the retail sale of firewood in the Rocky Mountain region of the United States; Colorado, New Mexico, Utah and Wyoming. The study examines who sells the wood, whether the product is infested with insects or fungi, and whether firewood is transported across state lines by campers.

State Forester Perspective

Ian MacFarlane, Northeastern Area Association of State Foresters, provided the Dialogue with the perspective of state foresters. Mr. MacFarlane pointed out that the Northeastern and Midwestern U.S. states have borne the brunt of the burden around non-native insects and diseases. In recent times, he pointed out, the primary focus has been on the control of firewood movement and the problem has been framed according to individual pests. A lack of comprehensive regulation across states is a key concern and this is due in part to a lack of consistency across the states. To address this, state foresters have worked together to achieve greater agreement, provide a united long-term vision, and communicate processes and goals.

Golden Spotted Oak Borer: A California Terminator

Steve Seybold, USFS, Pacific Southwest Research Station, provided an overview on the effects of the Goldspotted Oak Borer (GSOB). Mr. Seybold enumerated the symptoms of GSOB, including bark staining, woodpeckering, and bleeding wounds. Distribution in California is localized, although the value of oak as firewood increases the risk of it being moved around the state. Mr. Seybold explained that GSOB can survive in firewood, and illustrated that critical fact by describing an ongoing firewood study involving solarization treatment that he and Tom Coleman are conducting. When covered with plastic tarps, GSOB stayed alive over long periods in conditions of high humidity and heat, up to 70 Celsius.

Don't Move Firewood Website: A Tool for Slowing the Spread

Leigh Greenwood, TNC, oriented the group to the Don't Move Firewood campaign and website (DMF). Minimizing the movement of firewood is critical to combating non-native insects and diseases. A fundamental message of DMF is that firewood should not be moved farther than the distance a pest can fly. Getting the message out about the importance of firewood movement is difficult, although people are willing to change their behavior in small ways once they understand. DMF has billboards, posters, post card campaigns, ads in hunting regulation handbooks, DVD giveaway program, a You Tube video collection, a Twitter account, and a blog.

Facilitated Discussion

A number of participants were curious to know more about the particular conditions under which the firewood movement and GSOB experiments were performed. One participant was curious about the labeling of retail firewood sales; another suggested that big box stores are interested in buying certified wood, although the only states that have certification programs are those that have experienced the Emerald Ash Borer (EAB). One participant asked about the plastic material used to cover the GSOB samples, and another asked rhetorically how the survival of GSOB in the experiment has implications for ISPM 15. Another participant asked about quarantining GSOB early, as opposed to the late action taken around EAB in the Midwest. Steve Seybold noted that the scientific basis for quarantine is easier than the political basis. He also explained that GSOB does not go away based on seasonal change. A participant from the California Department of Food and Agriculture (CDFA) explained that eradication and quarantine are blunt instruments that are applied only when they are perceived to have a big impact.

One theme of the discussion was the interaction between or relative strengthens/weaknesses of regulations and outreach/education in changing behavior. Another panelist expressed the view that educational outreach and behavioral change is the only approach in states that will not pass regulations. Another participant suggested that publicity about regulations can be effective in changing popular behavior and practices, even in cases where the enforcement of that regulation is not entirely enabled. Another participant agreed, saying that having a regulation that is not fully enforceable still has value in setting expectations with the public. A number of participants had questions about regulations for APHIS representatives at the meeting; one point was made that the border inspection stations are the most effective (in cost and prevention) use of resources in regulation. An APHIS representative made the point that regulation alone does not achieve the end result; although APHIS is looking at regulation for firewood, additional approaches are needed such as outreach efforts, partnerships, and coordinated voluntary compliance efforts.

On the issue of firewood movement, one participant suggested that a websearch algorithm could be developed to monitor the price fluctuations per unit in a certain area. If the prices in a particular area

dip, the algorithm could alert DMF to movement patterns that need action. A number of ideas were suggested as means for controlling firewood movement; one participant suggested the creation of a firewood board (like a gaming board), another suggested creating “firewood rights” that can be controlled.

F. Panel #2: *P. ramorum* Movement to Distant States and Leaking into the Environment

Overview of extent of *P. ramorum* spread

Steve Oak, USFS, coordinates early detection surveys for *P. ramorum*. He provided the group with an overview of the disease spread. Sudden Oak Death (SOD) or *P. ramorum* is present in fourteen counties in Northern California and one in southern Oregon. *P. ramorum* locations in the last three years include all of the West coast, Southeast, Texas, Southeast, and assorted states like Colorado, Indiana, Pennsylvania and Maine. It was subsequently noted that *P. ramorum* was introduced on nursery stock to these states, but the disease has not been established. Unfortunately, a number of states have dropped the early detection survey programs due to two consecutive years of no positive detection.

East coast perspective on issue

Christel Harden, Department of Plant Industry, Clemson University, focused on the issues of biology, regulations, and “trace-forwards.” On biology, she described what has changed over the past five years rather than what was expected. These changes include; non-symptomatic positive plants, symptom expression at temperature extremes, and pathogens in soil. There is at least one study that *P. ramorum* can survive outside the range it was thought to be able; plants with *P. ramorum* have been detected in the deep south, in the middle of the summer in 90 degree weather. Ms. Harden explained that the pathogen in the soil needs to be considered when moving plants; negative soil can be held for months and then test positive. On regulations, she explained there is no substantive change in federal order in the last five years. 12 southern plant board states recently petitioned for a special needs exemption that was denied. Eastern states have taken every step afforded to gain additional protection. On trace-forwards, Ms. Harden cited nursery stock as a high-risk pathway but trace-forward’s are extremely costly to the receiving state.

West coast perspective on issue

Dan Hilburn, Oregon Department of Agriculture, spoke about the current program for engaging with SOD, weighing its strengths (plenty of healthy forests) against its weaknesses (diagnostic challenges, repeat positives, expense, and diminishing returns). He presented lessons learned for nurseries and forests and spoke about refinements that are needed. Mr. Hilburn also presented a vision for an effective, sustainable program; effectiveness at protecting at-risk forests, sustainable, feasible, works for other pests/diseases. As part of this vision, he recommended some actions such as: creating a host-free line in the forest in Humboldt County, California, a host-free doughnut around Curry County, Oregon, and eradicating new infestations outside of host-free “firelines.” In eastern forests, at-risk areas would be monitored for eradication as needed, and SOD outliers could be eradicated. In nurseries, the problem would be improved by cross-pollinating knowledge and best management practices (BMPs). Mr. Hilburn concluded by reminding the group that doing more of the same is not going to improve the situation, and time is needed to apply lessons learned.

Industry perspective on issue

Karen Suslow, Hines Nursery, offered a perspective on *P. ramorum* from private industry. She indicated the number of positive or infected nurseries has decreased in recent years in part because 2007 was a very dry year and in part because of an interim rule in 2004 requiring inspections. The inspections require identification of high risk plants, inspecting host plants when pathogen is most prevalent, and inspections of plants 2-3 times per year. Looking to the future, Ms. Suslow cited a number of actions being taken to effect the situation. The first is a voluntary BMP Pilot Program, which will be audited by the CDFA. Another is the Grower Assisted Inspection Program (GAIP). A third is a set of online trainings in California, Oregon, and Washington. A fourth is the opening of the National Ornamental Research Site at Dominican University (NORS-DUC). A fifth and final is a U.S. Nursery Certification Program which implements IPPC standards.

Facilitated Discussion

During the facilitated discussion, participants asked questions about three of the presentations. The first question was why the 12 southern states had their petition denied. The reason was that the data used for the petition was sourced from multiple states, rather than being state-specific. Another question, for Dan Hilburn, was about pest-free zones; why would the recommended actions work in California when they have failed to work in the east? The answer came that some topographical features of Humboldt County make it possible that the same technique would work. Another participant, familiar with the plans from the Oregon side suggested that the action is worth taking because it is clear the pest is not yet state-wide.

G. Special Presentation: Asian Longhorn Beetle Documentary, “Lurking in the Trees”

After the plenary session was adjourned at the end of day one, the Dialogue enjoyed catered hors d’oeuvre and dinner together at Fort Mason Center. Following the dinner, the group reconvened for a special screening of the new documentary “Lurking in the Trees,” about the Asian Longhorn Beetle. The documentary chronicles the municipal and popular response of Worcester, Massachusetts against an infestation of the Asian Longhorn Beetle. Following the screening the film’s production team formed a panel and took questions from the participants. The film’s director, Martin Hamburger, discussed the production process while participants received copies of the DVD.

III. Day Two – Wednesday, October 28, 2009

A. Panel #3: State Action to Address Non-Federally Regulated Pests

Walnut/1000 canker

Doug LeDoux, Missouri Department of Agriculture, provided a presentation on Thousand Cankers in Black Walnut trees. He began by stressing the importance of Black Walnut to the state of Missouri, and suggested that the quickest response to a pest infestation is usually the best response. He provided an overview of Thousand Cankers disease which has a natural range across the west coast and intermountain west. The disease occurs after the tree is attacked by the walnut twig beetle (*Pityophthorus juglandis*) and subsequent canker development is caused by a fungal associate (*Geosmithia sp.*) of the beetle. The range of Black Walnut is the eastern United States and halfway across the Great Plains, with the gap between the two territories only a few hundred miles wide. Mr. LeDoux enumerated the costs of losing Black Walnut in Missouri, including lumber, veneer, gun stocks, and cabinetry. Pathways include log movement and lumber from diseased trees. A quarantine of the disease would require regulated articles including the insects and pathogens, treatments, and safeguarding measures. Effective protection would require multi-state cooperation: near parallel quarantines; similar regulatory language; and stipulations for moving regulated articles that are easily understood and enforceable. Steps toward control include: awareness; education; consensus building; regulation; enforcement; and protection.

Puccinia/ohia rust

Lloyd Loope, US Geological Survey, Haleakala National Park, presented an overview of *Puccinia psidii*, and its potentially devastating effects on Ohia, the tree that comprises 85% of Hawaii's forest. Hawaii already has what is apparently a non-variable genotype of this neotropical rust, notorious for its broad host range in the myrtle family. The Hawaii's conservation community believes there is much good evidence indicating that arrival of additional genotypes could irreparably damage ohia forest. The flower-foilage pathway has been implicated by interceptions at ports of entry in Hawaii, especially on myrtle.

Hemlock woolly adelgid

Ken Rauscher, Michigan Department of Agriculture, gave a presentation on Hemlock Woolly Adelgid (HWA), a regulated non-federally quarantined pest. Unlike Thousand Cankers and Ohia rust, HWA has been around in the U.S. for a long time. HWA is known to exist from the northeast through the Appalachian southern belt. The natural range of hemlock is in the northeast, southern band, and in Michigan. There are two generations per year, and they show up as cottony masses on hemlock. HWA has both eggs and crawlers. Tree injury results from sucking sap from the twigs. Dispersal takes place via wind, birds, mammals and commerce. HWA originated from Japan and China, and was first discovered in the 1920's in western states. It was found in eastern states in the 1950s. Michigan established its quarantine in 2002. In 2006 the Michigan Department of Agriculture received a call from a landscaper who brought hemlock from West Virginia two years prior. It was obvious that it was HWA. The Department pulled out invoices for 2,000 trees and applied for pest control funding. The landscaper agreed to remove thirty-one trees at his own cost. He had brought the trees in from West Virginia but he also pulled native trees just to be sure. The hemlock were replaced with white pine and the landscaper followed up with root or soil treatments and chemical treatments of surrounding hemlock. USDA needs to reexamine its policy. There are some valuable

resources at risk in the country. It is not always as simple as saying that regulation will take care of the problem.

Facilitated Discussion

Taken together, these presentations stimulated discussion on a variety of issues. The participants considered questions about funding for solutions, regulatory constraints, proactive versus reactive measures, transportation pathways, and studies to combat the diseases.

The discussion began around Thousand Canker. No solution has been found to date, and the disease can survive in the wood for up to two years. There are no measures to control the movement, and stakeholders in Missouri would like to keep the east and west populations separated. Diminishing state budgets limit the resources available to apply toward the problem. New ideas on fundraising and collection are needed. One participant described the pest control compact, which has been authorized in thirty-eight states so far. Under the compact, money is pooled from the states based on their agricultural production. Neighboring states can request funding from each other to address issues that cross state lines. Definitions of native versus exotic are key to how the compact is managed. Another theme was the reactive nature of response to pests and diseases, and the expenditures needed to fight the disease compared to the costs in damage should they run rampant. Participants expressed views that supported an early, proactive response coupled with ample funding that in is justifiable in hindsight when economic damages have been avoided.

One participant asked about the potential for new strains of Ohia rust and the virulence of such strains. A study on that topic funded by USDA Forest Service is underway in Brazil, where the rust is native and attacks plantations of Australian eucalyptus; 300 samples have been taken that will be subjected to DNA analysis. Eight to 20 of the most aggressive strains will be tested on 25 different batches of ohia. The issue of plants picking up ohia rust via passage through California came up with participants holding contrasting opinions. One participant from California indicated that rust has yet to be found amongst guava or eucalyptus trees in California. Another countered that almost all myrtle-family materials sent to Hawaii travel through California first.

B. Panel #4: Solid Wood Packaging as a Pathway

Recent economic study

Frank Lowenstein, TNC, presented the findings of a recent economic study sponsored by TNC and the US Forest Service, assessing the economic impact of forest invaders to develop a predictive model of future economic impacts. The study also assesses the benefits and costs of phytosanitary policy using ISPM 15 as a case study. Absent from the presentation was economist and co-author Mike Springborn from UC Davis. Mr. Lowenstein noted that every county in the U.S. has at least three non-native pests, whether or not that county has forests. The study has attempted to determine the entire impact from the whole range of forest pests. Estimated damages the wood borer alone has been set at \$10.7 billion over the next ten years. The study is expected to provide a vast amount of data that has been absent until now. The analytic framework within the study looks at costs and benefits of control. Data sources for the study include AQIM, and pre-ISPM 15 information for compare-contrast. The sample size is large, and should allow prediction of changes with accuracy. An economic paper will be published that will consider the implications of the analytic framework on plants for planting. The timeline for the project is to get all papers written and analyzed by April 2010.

Experience at the ports

David Talpas, U.S. CBP, provided an overview of the process by which incoming cargo is inspected at the Port of Oakland and other U.S. ports. The day before, Mr. Talpas hosted a group of about 20 Dialogue participants at the Port of Oakland. His presentation provided the entire plenary with some of the same information the small group had seen in person the day before. Mr. Talpas' presentation was an overview of what CBP currently find in and on cargo arriving to the United States. Providing context and recent history, Mr. Talpas reviewed some key dates: September 16, 2004 – APHIS introduced an effort to reduce the levels of pests coming into the United States (the final rule requiring treatment for wood packing material was published on this date); September 16, 2005 – all wood packing material was required to have the ISPM-15 mark or stamp to prove that wood packaging had been treated or fumigated (this was the day regulatory enforcement began); July 5, 2006 – the decision was made to return all infested cargo immediately upon discovery (this date was when full implementation of the rule started which required returning of cargo not in compliance). Inspectors look for the logo and telltale signs of live pests. More important than the presence of a stamp is whether the insects are dead or alive. There are eight regulated families against which CBP takes remedial action. The top five countries of origin which send cargo that require remedial action (ranked in order): 1) Mexico; 2) China; 3) India; 4) Germany; and 5) Italy. U.S. states that receive the highest number of cargo from other countries: 1) California; 2) Texas; 3) Georgia; 4) Florida; and 5) Arizona. States with the highest frequency of remedial actions: 1) Texas; 2) Arizona; 3) California; 4) Georgia; and 5) Florida. Of those, Texas has four times the rate of remedial action than any other state – they are doing a really good job.

State perspectives

Shashank Nilakhe, Texas Department of Agriculture, provided a state perspective on solid wood packaging as a pathway. He noted that the standards of the International Plant Protection Convention (IPPC), with 137 contracting parties, meets the entry requirements of U.S. CBP. Although the convention is a good start, it needs improvement, particularly because revising it is very difficult as it is consensus based and the contracting parties are nation states, not people. The compliance rate is about 95%, and the non-compliant 5% create the big problems. Ships may also be compliant despite detection. The Port of Houston, Texas receives largest number of vessels nationally, where 800 pest detections occur annually. 53% of those detections are scolytids and 69% are found in Texas. Pests that escape cost states, government agencies, and citizens for the control, containment, and eradication phases. Mr. Nilakhe suggested that increased efforts should be focused on: enhancing enforcement, targeting previous violators, analyzing interception patterns, developing quality control tools, and holding dialogues with the companies or countries that have the greatest number of violations.

Facilitated Discussion

During facilitated discussion, several participants had questions about CBP and the port inspection system. One participant asked about the level of knowledge and familiarity port inspectors have with APHIS regulations. Another participant asked whether infested cargo ever carries the approved logo. The response was that counterfeiting of the logo does occur and as such there are cargo shipments that carry the logo but are nonetheless infested.

C. Panel #5: Outreach and Education: Dealing with a Skeptical Public

Sudden Oak Death in Oregon

Alan Kanaskie, Oregon Department of Forestry, offered a presentation on SOD in Oregon. He explained that 40-50 new SOD sites arise each year (some 600 acres) in southern Oregon and northern California. Ten percent of those sites are on Federal land. Roughly 80 private landowners hold the title to the rest of the affected land; some of these owners are highly skeptical of the need to treat SOD. The treatment process involves four steps: injecting tanoak with herbicide to prevent stump sprouting; cutting and burning tanoak and other hosts; reimbursing state contractors or landowners; and SOD treatment BLM understory removal. Strong state statutes exist which require landowners to take action. The motivation for landowners to act is the dangerous new pathogen with a scary name, unknown potential for damage, and a desire to stop the spread. Unfortunately, Mr. Kanaskie explained, many of the landowners distrust government, do not believe there is a problem, and/or have doubts about the science explaining it. Despite the good intentions of government agencies, funding for control and eradication is inconsistent and halting. This erodes the trust of land owners. Key lessons about private landowners include the need to hold public meetings, seek out one-on-one communication, retain trusted local people on team, maintain consistency among the agencies, and involve other partners (such as universities). Key lessons about dealing with federal land include the balance between endangered species versus invasive species, and rapid response may be critical but it highly unlikely unless a biological opinion and/or environmental assessment is in place already.

Asian Longhorned Beetle in Massachusetts

Colin Novick, Greater Worcester Land Trust, spoke about ALB in Worcester, Massachusetts. The public response to ALB has been very constructive for combating the pest. The eradication and replanting of trees will take ten years, with successive annual extractions that will hopefully get smaller and smaller. The first year cut was the largest and most traumatic; the entire town was stripped of its foliage in a matter of days. Applying an aggressive and painful remedy is justified by the dollar value of what it would cost not to act (\$669 billion). The cultural arguments for acting work well on the local level – saving foliage and private wood lots, and protecting the maple syrup and tourism industries. Thankfully public skepticism was overcome by a sense of moral obligation, a civic duty, and a sense the community needed to swallow a bitter pill to ensure that the rest of New England and Canada would not be affected.

Holding regular public forums, from the very beginning, was crucial to getting the community educated and supportive of the need for action. This involvement mitigated the fear that many citizens have of government intervention. The interest of stakeholders was intense; homeowners had a lot to say about all the trees on their street disappearing overnight. Naturalists wanted an organic, holistic solution that just did not exist. Some wanted to leave the situation to sort itself out. The city offered citizens the opportunity to participate in damage surveys. Four public forums provided a public “off gassing,” with lengthy question and answer sessions with a state forester, an APHIS representative, and a municipal representative. They were looking for ways for people not to feel powerless as they were losing thousands and thousands of trees.

Light Brown Apple Moth in California

Helene Wright, State Plant Health Director, USDA APHIS, spoke about Light Brown Apple Moth (LBAM) in California. LBAM was first identified in nine counties across California in 2007. A technical working group concluded that pheromone treatments were the solution. The working group held a number of pre-meetings with stakeholders and politicians. Engaging with the public was a problem from the very beginning; droves of people showed up to the first meeting screaming at the working group. After the second meeting the public went directly to the city council meeting

across the street; the public was very openly against the program. Members of the public convinced the city council to provide meetings where people could form a long line and provide information that was non-factual, with no opportunity for a counter-point. With government representatives standing against an opposition group there was no way to succeed. The working group had no trusted local people on its side. The popular opposition was based on fear and misinformation. The opposition groups were very skillful at using YouTube and Facebook and other social networking outlets that we were not even allowed to view on our government computers. The key to winning a battle of public perception is having the most people telling the same story.

Facilitated Discussion

Following on the stories of public involvement in Massachusetts, California, and Oregon, the group compared and contrasted instances of success and failure to discern what best practices might be applied to new problems. In California, Ms. Wright explained that the presence of highly scientific jargon in the discourse led to confusion between the stakeholder groups, with the scientists feeling that objective facts began to be misinterpreted. For example, the public often confused pheromones with hormones, which steered the conversations off course. One participant wanted to know why certain stakeholders in California were opposed to the spraying effort. Ms. Wright explained that some strong opposition came from stakeholders in the University of California system, while private industry remained somewhat uncommitted due to concerns about going up against public opposition. The California situation was based on a pre-conceived solution that was presented to the public for approval, without involving them in solution formation.

In contrast, the Worcester, Massachusetts problem with ALB involved leaders going to the public to seek their input and participation in the design of a solution. The point was made that the framing of a solution has a great deal to do with its success. Representatives of the ALB situation in Worcester, Massachusetts explained that the collective municipal response was due in large part to the legacy of Puritan Ethic traditions; a perceived obligation to civic responsibility. There was widespread opinion that Worcester needed to act to protect the region, not just the city itself. That commitment was surprising to APHIS and the regulatory authorities as it was an unexpected boon to their efforts at containment. Interestingly, however, the individualism of puritan traditions may have also played a role in nearby towns remaining unresponsive to getting involved in solving the situation in Worcester. Another interesting point was around the totality of the damage; due to the overwhelming severity of the crisis, with the vast majority of trees needing to be removed en masse, the public was supportive of wholesale removal. Mr. Novick explained that ironically, as removal becomes less widespread and more selective over time, the effort to obtain consent from landowners may become more difficult than during the zero hour of the crisis. Because people perceived that everyone was losing their trees together, the loss was somehow more tolerable. Public opinion about battling the disease was even shaped by an ice storm that illustrated how many trees were sick by virtue of how many fell over.

Mr. Kanaskie explained that the first meeting in Oregon involved presenting the situation to the public and offering a proposal for action, but stopping short of a solution. Although there was no corollary to the Worcester “Puritan Ethic” in Oregon, Mr. Kanaskie explained that the citizens wanted to do the right thing for the environment even at great cost to them. Another example of public support being shaped by evidence was around Gypsy Moth in Ann Arbor, Michigan, where citizens were able to see the damage done in nearby Detroit and find the motivation to act early.

D. Breakout Session (WG#1): Prevent Introduction of New Pests and Diseases

Faith Campbell, TNC, reported out on the discussion held in the Workgroup #1 breakout session. The greatest amount of interest was in the wood packaging issue, centering on the efficacy of ISPM 15 and data collection. Group participants expressed interest in working with APHIS and CBP to bring about better data collection. Some were interested in continuing to engage on Q-37, including following up on the Workgroup’s efforts on NAPPRA as well as becoming involved with two upcoming rulemaking processes focusing on the development of criteria for foreign suppliers of material. There was also considerable interest in engaging on “under the radar” imports via U.S. Postal Service, FedEx, etc. This issue might best be addressed through outreach and education efforts, however, and Ms. Campbell suggested that such activities could tie into the pending Plant Smart program.

Workgroup #1 – Prevent Introduction of New Pests and Diseases	Who	Completed by
1. Hold WG #1 conference call to discuss follow-up on NAPPRA and possible comments on upcoming rulemakings (e.g., standards for foreign plant suppliers)	Faith C. and RESOLVE	Friday, Dec. 11
2. Consult with APHIS and USFS on options for becoming engaged on the improvement of data collection on ISPM 15	Faith C.	Friday, Jan. 29
3. Consult with WG#6 on possible education and outreach efforts on the USPS/FedEx pathway	Faith C.	Friday, Jan. 29

E. Breakout Session (WG#2): Limit the Spread of Pests and Diseases in the U.S.

Ken Rauscher reported out on talks held during the breakout session for Workgroup #2. The group spoke about firewood movement and the National Firewood Task Force efforts; also solid wood packaging and the APHIS efforts to develop a strategy (rule making process). The group discussed developing a common and shared vision of success on *P. ramorum*. Some revision of the rules is taking place around bio-control and that may present the Dialogue with an opportunity. Mr. Rauscher explained that the Steering Committee needs to engage with the issue of responding to native pests, and decide whether that is within the purview of Dialogue. Some participants expressed concern with the Dialogue addressing native pests, while others made the point that a pest native to one part of the country may not be native to another, thus complicating the role of national and state boundaries in defining the mandate of the Dialogue. One participant made the point that “exotic organism” is a classification based on geography rather than politics. The group agreed the Steering Committee should examine the issue.

Workgroup #2 – Limit the Spread of Pests and Diseases in the U.S.	Who	Completed by
1. Coordinate efforts related to firewood movement (e.g., tracking the APHIS' National Firewood Task Force)	Workgroup #2 – Firewood Subgroup	On-going
2. Share survey results on wood dealers	Jodie Ellis	Friday, Dec. 9
3. Coordinate efforts related to <i>P. ramorum</i> (e.g., encourage “framework” development)	Workgroup #2 – <i>P. Ramorum</i> Subgroup	On-going
4. Coordinate efforts related to Non-federal Quarantined Pests (e.g., tracking the USDA Pest Advisory Committee efforts)	Workgroup #2 – NFQP Subgroup	On-going
5. Share report on different ways of engaging the public (e.g., voluntary survey efforts) in the Northeast	Ann Gibbs	As soon as available
6. Track Solid Wood Packaging, biocontrol, and voluntary survey efforts	Ken Rauscher/ Workgroup #2	On-going

F. Breakout Session (WG#3): Engaging Private Groups

Janice Alexander, UC Cooperative Extension, Marin County, reported out for Workgroup #3. She described three areas of focus for engaging private groups: 1) public outreach, working with industry toolmakers, and center for risk understanding; 2) professional outreach and education, corporate citizenship, working with existing programs like IPM to bring in more of the pest angle and existing organizations on certification; and 3) engaging industry in action, such as the eBay “Green Team,” external certification programs, and providing leadership with firewood.

Workgroup #3 – Engaging Private Groups	Who	Completed by
1. Consider which “ <u>Public Outreach in Partnership with Industry</u> ” potential activities to undertake (e.g., Plant Smart Campaign; engage smaller forest/woodland/ landowners; develop proposal to create a “National Center for Risk Understanding” (outreach re: pesticides and risk)	Judy Antipin, Joe Chamberlain, Dave Fujino, Frank Lowenstein, Colin Novick, Katie Palmieri	Friday, Jan. 22
2. Consider which “ <u>Outreach and Education to the Professional Community</u> ” potential activities to undertake (e.g., work through the extension network to expand existing IPM outreach to nurseries to include an invasives prevention angle)	Janice Alexander, , Clint Burfitt, Dave Fujino, Inga Meadows	Friday, Jan. 22

<p>3. Consider which “<u>Engaging Industry in Action</u>” potential activities to undertake (e.g., work on non-native standards for internet sales, e.g., outreach to eBay Green Team (Clint give contact to Frank); Build on certifications and standards of existing professional societies and trainings (e.g., Master Gardeners, Master Nurserymen, Sustainable Sites, LEED), or develop new standards; enhancing corporate good citizenship – education, training, annual award)</p>	<p>Clint Burfitt, Frank Lowenstein, , Katie Palmieri</p>	<p>Friday, Jan. 22</p>
<p>4. Work with interested volunteers to refine the priorities, goals and next steps for Public Outreach, Professional Outreach, and Engaging Private Industry in Action</p>	<p>Frank Lowenstein</p>	<p>Friday, Jan. 22</p>

G. Breakout Session (WG#5): Activities to increase USDA funding

Faith Campbell, TNC, reported out for Workgroup #5. She explained that there is some willingness within APHIS to think about exploring how money is allocated for EAB, and less interest in using appropriations process. She talked about an immediate funding need; APHIS inspectors are facing cutbacks because user fees are down – there is a rulemaking process on raising the user fee rates, and November 27 is a key date.

Workgroup #5 – Activities to increase USDA funding	Who	Completed by
<p>1. Develop user fee recommendations (user fees have declined, resulting in less money for APHIS) – CFD can ask for emergency increase in user fees</p>	<p>Craig draft; Michael B. to review</p>	<p>Wednesday, Dec. 9</p>
<p>2. Develop consensus funding recommendations on annual appropriations</p> <ul style="list-style-type: none"> • Share funding numbers/estimates • Review • Share with Steering Committee/Dialogue for approval/signatures 	<p>Faith draft outline and coordinate with WG #2</p>	<p>November 2009 December 2009 December 2009 January 2010</p>

<p>3. Develop recommendation letter on Forest Service’s Forest Health Protection program (to cover funding for state and private forestry)</p> <ul style="list-style-type: none"> • Share with Steering Committee/Dialogue for approval/signatures 	<p>Faith Campbell <i>create outline</i>; and Michael Buck <i>draft letter</i></p> <p>Faith/RESOLVE</p>	<p>(TBD)</p>
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H. Breakout Session (WG#7): Firewood issues – How Don’t Move Firewood Can Work for You

During the Don’t Move Firewood (DMF) breakout session, Leigh Greenwood, TNC, gave a brief presentation on DMF campaign’s outreach and education efforts in 2009. She then invited ideas from the group on activities for the DMF campaign in the coming year, soliciting suggestions of specific projects and outreach efforts for which DMF could provide or develop materials in partnership with Dialogue participants. Group participants generated ideas for four new projects, including a potential campaign on the goldspotted oak borer (GSOB) in California and an educational effort on the movement of firewood within a quarantine area.

The group also discussed some broader ideas for confronting the issue of firewood movement, such as promoting firewood-friendly campgrounds, inserting notices into local papers encouraging people to buy firewood locally, and supporting kiln-dried firewood regulations. One participant suggested the idea of a firewood voucher program that would allow campers to redeem unused firewood purchased at one campground at another location, in order to prevent them moving the firewood from place to place.

If Dialogue participants would like their organization to become involved with the DMF campaign, they should contact Leigh or Paul De Morgan to discuss becoming supporters of the DMF website.

Workgroup #7 – Firewood Issues: How Don’t Move Firewood Can Work For You	Who	Completed by
1. Follow up with Janice Alexander, Bill Jacobi, Colin Novick, and James Scheid on potential DMF projects	Leigh Greenwood	ASAP
2. Contact Leigh G. (lgreenwood@tnc.org) or Paul De Morgan (pdemorgan@resolv.org) if interested in becoming a DMF website supporter	Dialogue participants	Ongoing
3. Reengage the full Workgroup as necessary	Leigh Greenwood	Ongoing

I. Where Do We Go Next? Timeline and Actions for 2010

Following the Workgroup reporting, Senior Mediator Paul De Morgan solicited the thoughts and reflections of participants, old and new. One participant suggested creating another documentary with a national scope. Another participant asked whether the Dialogue has representation at invasive species conferences. While Dialogue participants attend such events, and can speak as advocates for the Dialogue, they do not formally represent it.

IV. Summary and Next Steps

Senior Mediator Paul De Morgan concluded the meeting by acknowledging the hard work undertaken by many contributors to make the fifth Dialogue meeting a success. Mr. De Morgan also thanked those Dialogue participants who travelled a long distance in order to attend. Mr. Lowenstein offered a deep, heartfelt thanks to all Dialogue participants in attendance for their contribution to the success of the group.