

Agenda Item No.:	4
Title and # of Issue:	Forest Regulation – Issue #6 Invasive Species – Developing Issue Work Plan #8
Objective # & Title:	Objective 4 – Effective and Efficient Implementation of the Forest Practices Act Private Forests 2006 Forest Health Unit Update
Date of Presentation:	June 6, 2007
Contact Information:	Marganne Allen Forest Health & Monitoring Unit Manager Private Forests Program (503) 945-7240 mallen@odf.state.or.us

SUMMARY

The purpose of this agenda item is to provide an overview of the major insect, disease, and other damaging agents affecting Oregon forests in 2006 (ORS 527.335 and Programmatic Annual Work Plan item), to provide a more detailed discussion of the Sudden Oak Death (SOD) eradication program and to recommend conceptual elements to explore as part of the Board's developing Work Plan #8 – Invasive Species.

Statewide, even with significant local infestations in Central Oregon, overall declines in bark beetle populations were observed in 2006. In contrast, increased damage was observed due to defoliating and conifer needle sap feeding insects, Swiss needle cast, and black bear. Ongoing monitoring for non-native insects found Asian and European Gypsy Moths as well as several exotic wood-boring species. Despite an aggressive eradication program, the number and acreage of SOD-infested tanoak trees in southwest Oregon returned to initial infection levels. The eradication program is still considered effective, maintaining the disease at low levels and within a 26 mi² sub-county quarantine as opposed to the multiple countywide quarantines throughout coastal California.

CONTEXT

The Cooperative Agreement signed in 1965 between the State Forester, the Board of Forestry (BOF), and the USDA Forest Service provided for personnel to carry out systematic surveillance and reporting of insect and disease conditions on forest lands. In addition, Oregon's Forest Insect and Disease Law, ORS 527.335, mandates that the State Forester conduct surveys to determine the presence, extent, trend, and impact of native and invasive pests as well as overall forest health. Annual aerial and ground surveys fulfill this statute and support the following critical functions/measures:

- Departmental Key Performance Measure (KPM #629-14: Percent of aerially surveyed Eastern Oregon forests that are free of insect damage).
- Strategy F.a. of the Sustainable Forest Management Indicators adopted by the Board in January 2007 (Tree mortality from insects, diseases, and other damaging agents).
- Private landowner reporting requirements for forest certification systems.

- Annual regional maps and summaries for Stewardship Foresters, State Forests, and other District and Regional staff.
- Synthesis into the annual USDA Forest Health Highlights in Oregon (See Attachment 1) targeting forestry professionals and the general public.
- USDA Forest Service national risk mapping effort used for prioritizing bark beetle mitigation funding (\$2.9 million Department-managed funding since 2003).
- USDA Forest Service forest health conditions report to the U.S. Congress.

The development of an Invasive Species Workplan (#8) was approved by the Board in November 2006. This development was based upon the Board's first issue scan and a subsequent staff paper and presentation discussing invasive species. Recent difficulties in funding the ongoing wildland Sudden Oak Death eradication program being implemented on behalf of the Department of Agriculture (ORS 561.510) has highlighted the need for a state-funded program to execute such efforts. A conceptual model for the early detection and rapid response to invasive species is a recommended addition to the Invasive Species Workplan (#8). In addition, with the passage of HB 2068 the Department will soon become a voting ex officio member of the Oregon Invasive Species Council.

BACKGROUND AND ANALYSIS

The annual aerial survey of forest lands in Oregon began in 1947. The sixty years of aerial survey information collected for Oregon has been recognized at the regional and national level as one of the best long-term data sets on forest health information available. The Department has also been recognized nationally for developing and testing new digital sketch-mapping and aircraft safety technologies that have improved the efficiency and timeliness of aerial survey information delivery. In cooperation with the USDA Forest Service, the Departmental Aviation and Forest Health units currently map damage due to insects and disease on 28 million acres. Maintaining Departmental ownership of the survey aircraft allows the Forest Health unit to meet both private and public landowner needs for additional, specialized aerial surveys for damaging agents such as Sudden Oak Death, Swiss needle cast, and black bear. Insects and disease can cause significant tree mortality, growth loss, and damage over large areas each year. Still, their value as a natural part of the forest ecosystem contributing to decomposition, nutrient cycling, vegetation diversity, and wildlife habitat cannot be overlooked.

The following is a summary of Forest Health Conditions in Oregon in 2006:

- Sudden Oak Death, caused by the invasive pathogen *Phytophthora ramorum*, expanded in 2006 despite the aggressive eradication effort. Two consecutive years of unusually wet spring weather are thought to have favored spread of the pathogen. The disease is still confined to a small (26 mi²) quarantine area near Brookings in Curry County.
- Since 2002, the Department has received over \$400,000 from the USDA Forest Service for surveying and monitoring and over \$1 million for the eradication of Sudden Oak Death. Early detection and rapid response have limited the economic and ecological impact of this pathogen on Oregon's forests and industries so far. Intensification of the disease and delayed federal funding caused by the continuing resolution in the U.S. Congress highlighted the need for a state-funded invasive species eradication program.

- Precipitation levels in 2006 reduced moisture stress and resulted in greater resistance to bark beetles. Statewide declines in the total area affected by bark beetles were driven in large part by reduced fir engraver damage. In contrast, mountain pine beetle outbreaks have increased for the seventh consecutive year along the east slope of the Cascades.
- Severe winter storms produced high levels of windthrow this year in western Oregon. Increased stand susceptibility to Douglas fir bark beetle outbreaks is expected over the next 2-3 years.
- Damage by defoliating insects increased in 2006, driven primarily by the activity of western spruce budworm in eastern Oregon. Budworm damage increased substantially this year, while the Pandora moth outbreak in south-central Oregon continued to collapse. Increases in pheromone trap catches of Douglas-fir tussock moths also occurred.
- Increased detection and damage by a native conifer needle sap feeding insect pest, the black pineleaf scale, also occurred this year, affecting a number of areas in central Oregon.
- Pheromone trap catches of European gypsy moths increased in 2006, and a single Asian gypsy moth was also detected. Eradication efforts by the Oregon Department of Agriculture were conducted in St. Helens and Bend during the month of May.
- Exotic wood-boring insect monitoring efforts did not detect any of the primary, non-native species of concern including Asian longhorn beetle, emerald ash borer, pine shoot beetle or granulate ambrosia beetle in 2006; however, there were detections of several other exotic wood-boring species never before trapped in Oregon.
- The 2006 Swiss needle cast survey results showed a marked increase in the area of forest with symptoms of Swiss needle cast compared to the previous 3 years. Survey conditions were excellent and the observers considered the 2006 survey to be the most reliable to date.
- The Oregon Department of Forestry and the U.S. Forest Service cooperate in a national ozone-monitoring program. Ozone injury to plants has not been detected in any of the 35 Oregon plots.
- The aerial survey for black bear damage to trees in western Oregon indicated levels of damage almost double the ten-year average of 27,000 acres.

RECOMMENDATION

Department staff recommends the Board of Forestry add a conceptual approach to funding and implementing an early detection and rapid response program to invasive species involving key stakeholder groups to the draft Invasive Species Work Plan – Issue 8.

ATTACHMENT

- (1) Forest Health Highlights in Oregon – 2006
(Copies will be available at June 6, 2007 Board Meeting)