

Agenda Item No.:	D
Work Plan Title & #:	Private Forests Work Plan 6
IBI # & Title:	IBI # 3 Support for the Forest Practices Act, Land Use Planning and the Oregon Plan
Title:	Pesticides
Date of Presentation:	April 24, 2009
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## **SUMMARY**

This report provides a summary of Board and Department roles and responsibilities in terms of policy and monitoring, proactive participation, and maintaining current scientific information on pesticides (Workplan #6, Intermediate Board Issue 3, Topic 4). No further action is required.

## **CONTEXT**

Private Forests Work Plan 6, Intermediate Board Issue 3 supports an effective, science-based, and adaptive Oregon Forest Practices Act and a strong but flexible land use planning program as the cornerstones of forest resource protection on private lands in Oregon.

This item is in support of Topic 4 (Pesticides). At the March 2008 meeting (Agenda Item 9), the Board was given detailed information on relevant policy, regulations, and Department monitoring of pesticides to date. In order to continue to provide the Board with information specific to this issue, this item again provides a summary of relevant policy and regulations and the role and responsibility of the monitoring unit regarding pesticides (chemicals) in context of interagency, statewide, and national efforts (research, monitoring, legal, and regulatory) on pesticides.

## **BACKGROUND AND ANALYSIS**

### Regulatory & Policy Environment

The Department is one of four state agencies responsible for varying aspects of the safe use and distribution of chemicals under state and federal law (Attachment 1, p.1). The Forest Practices Act (FPA) defines the role and authority of the Department specific to setting standards for natural resource protection when chemicals are used in forest

environments. Statutes require the Department to use integrated pest management (IPM) practices (ORS 634.660, 527.321). The IPM processes described seek to identify environmentally and economically efficient methods for controlling pests according to agency or landowner objectives, should a landowner choose to use pesticides in managing their forestlands. The 2003 *Forestry Program for Oregon* policy direction related to pesticides identifies existing regulations and the importance of monitoring to inform adaptive management. The Board has set past policy on pesticides in a set of 12 principles created to guide review and revision of the FPA chemical rules that might be considered (Attachment 1, pp.2-3). The principles emphasize the following themes: Voluntary use of IPM, recognition and consistency with existing regulatory authorities, adaptive management principles to protect resources, recognition of human health and chemical trespass issues as being outside the Department's regulatory authority, the desire for flexible but enforceable rules, and the importance of monitoring.

#### Proactive Participation & Ongoing Commitments

Department personnel are participating in regulatory, monitoring, and other cooperative efforts on pesticides at a statewide and watershed level (Attachment 1, pp. 3-6). These efforts include: Advising the Department of Environmental Quality (DEQ) toxics rule making committee due to the increase in the fish consumption rate; cooperating in the statewide Pesticide Management Plan for Water Quality Protection (Water Quality Management Plan – WQMP), a process for preventing and responding to pesticide detections in ground and surface water; supporting DEQs South Yamhill Pesticide Stewardship Partnership (PSP), a voluntary effort to identify local issues and improve water quality; and providing feedback on DEQs Senate Bill 737, which requires identification of priority persistent bioaccumulative toxics and source reduction and control methods.

Ongoing efforts include the Pesticides and Schools Work Group and membership in the Pesticide Analytical Response Center (PARC). The Work Group is focused on examining the issue of pesticide use within and near schools. PARC is a multi-agency group that works within existing authorities to analyze and respond to pesticide-related incidents in Oregon that have suspected health or environmental effects

#### Department Monitoring Roles and Responsibilities

The Department is required by rule to assess monitoring needs and prioritize efforts related to the chemical rules (OAR 629-620-0700). Similar mandates exist for the landslides and public safety and riparian rules (OARs 629-623-0000(4) & 629-635-0110). Monitoring staff maintain some technical expertise in these subject areas and any other topics relevant to the FPA through their regular work duties, by attending and presenting at conferences and workshops, training, informal networking with other professionals, membership in professional societies, and automated literature alerts through the State Library.

A total of 89 key questions were identified in the 2002 Monitoring Strategic Plan, from which a list of ten (10) priority monitoring projects was identified. A pesticides question appears on this overall list as moderate in priority and focuses on landscape-level monitoring of FPA effectiveness. A total of five key questions related to pesticides were identified in the Monitoring Strategy (Attachment 1, pp.6-8).

Oregon Administrative Rule 629-620-0000(3)(a) requires that forest practice rules ensure chemical and other petroleum products do not occur “in quantities that would be injurious to water quality or to the overall maintenance of terrestrial wildlife or aquatic life.” In meeting this rule standard the Board is also bound by ORS 527.714, which requires specific “findings” before considering new or increased rule standards, including the need to determine that under existing rules “there is monitoring or research evidence that documents that degradation of resources...is likely.” Since the last revisions to forest practice chemical rules in the mid-1990s, such findings have not been made. Amongst the reasons for the lack of information available to potentially make such findings include the difficulties associated with identifying benchmarks or “concentrations of concern” against which to compare monitoring data.

Toxicologists and researchers throughout this field of study are grappling with the issue of benchmarks, lethal, and sub-lethal effects of pesticides in regulatory, voluntary, research, and legal actions at the state and national level. For the statewide Water Quality Management Plan, DEQ hired a graduate student to conduct research on various benchmark processes for aquatic life, and with DHS, are evaluating sources for acceptable human health benchmarks where no regulatory standards exist. A 2001 lawsuit required the U.S. EPA to review potential effects of 54 pesticides on listed salmon species. Concerns about synergistic or single-chemical effects on olfactory systems and behavior of salmonids have been raised in other research.

Recent monitoring and research information indicate that current regulations adequately protect fish-bearing streams from aerial pesticide drift. Key questions remain regarding the risk of contamination from Type N streams, runoff and landscape levels of contamination across land-uses. Monitoring conducted by other local and federal groups identified forestry-use pesticides in streams at low though sometimes frequent levels. Inferences from these monitoring efforts are limited by sampling frequency and potential contamination from other land uses. The South Yamhill Pesticide Stewardship Partnership should help assess pesticide contamination across land uses (forestry, agriculture, urban) and to a limited degree with runoff. A planned study within the Alsea Watershed Study will also help characterize what levels of pesticides are found in streams due to contemporary forest practices. In view of the use of pesticides at a landscape level and the potential for cumulative, synergistic, or additive effects, single land-use approaches are problematic.

In conclusion:

- A suite of policy and regulations exist to guide the Board on policy discussions regarding chemicals application in the forest environment.

- The Department is engaged in a variety of regulatory, policy, and monitoring efforts for chemicals at a watershed and statewide level.
- The Monitoring unit has stayed current with its FPA monitoring requirements by prioritizing monitoring needs and continuously evaluating the means to implement them.
- Available benchmarks against which to compare chemicals monitoring data for acute and chronic lethal effects on humans and aquatic life are limited. This is particularly true for sub-lethal or multi-chemical effects.
- Departmental and other local monitoring data currently indicate that forestry use herbicides tend to occur at relatively low concentrations.
- Use of chemicals across the landscape makes single land-use approaches problematic, especially in light of potential sub-lethal or additive and synergistic effects associated with some chemicals.

### **RECOMMENDATION**

This report is informational only, and completes the Board Products for Workplan #6, Intermediate Board Issue 3,, Topic 4. No further action is required.

### **ATTACHMENTS**

- (1) Summary of Board and Department roles and responsibilities: Additional Details