Pesticide Incident Reporting and Tracking Review Panel

2006 Annual Report - Summary of 2005 Data

A report to the Governor and the legislature as required by Chapter 380, Laws of 1989, and RCW 70.104.

Approved by the Pesticide Incident Reporting and Tracking Review Panel, May 2007.

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DOH 334-134 September 2007

Agency Contacts

Contacts for agencies and organizations whose pesticide-related data constitute the basis for this report.

Washington State Department of Agriculture

Ann Wick _____ 360.902.2051

Washington State Department of Ecology

Kelly McLain _____ 360.407.6938

Washington State Department of Health

Cynthia Lopez _____ 360.236.3340

Washington State Department of Labor and Industries

Pamela Edwards _____ 360.902.6457

Washington Poison Center

William Robertson, MD _____ 206.517.2356

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List of Acronyms

DOH	Washington State Department of Health
DPP	Definitely, Probably or Possibly
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
L&I	Washington State Department of Labor and Industries
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
PCO	Pest Control Operator
PIRT	Pesticide Incident Reporting and Tracking
RCW	Revised Code of Washington
SPI	Structural Pest Inspection
UPEST	Urban Pesticide Education Strategy Team
WAC	Washington Administrative Code
WDO	Wood Destroying Organism
WISHA	Washington Industrial Safety and Health Act
WPC	Washington Poison Center
WPS	Worker Protection Standard
WSDA	Washington State Department of Agriculture

Executive Summary

The annual report summarizes pesticide incidence data collected by agencies during 2005 and activities of the PIRT Review Panel for 2006.

The Pesticide Incident Reporting and Tracking (PIRT) Review Panel was created by RCW 70.104.090 to monitor pesticide-related incidents that have suspected health or environmental effects. PIRT panel members include representatives of five state agencies and the Washington Poison Center (WPC) that respond to statewide incidents, two university members, a practicing toxicologist, and a member of the public appointed by the Governor (Appendix A).

Member agencies conduct pesticide incident investigations in accordance with their specific statutory responsibilities and report findings to the PIRT panel for evaluation. PIRT submits an annual report summarizing pesticide incidents to the legislature. This 2006 report presents individual and combined agency data for 2005 and a summary of the activities of PIRT and its member agencies for 2006.

Combined Agency Data

The overlap in pesticide-related cases between agencies and the Washington Poison Center for 2005 is displayed in Table 1. The shaded cells show the total number of incidents reported to PIRT by each agency. The white cells show the numbers of incidents that overlap for the agencies represented by the cell. Where two numbers appear in a cell, the first number represents the number of events and the second number represents the number of people involved.

Table 1. Overlap of Pesticide-Related Events* by Agency, 2005

	WSDA	Ecology	DOH	L&I Claims	WISHA	WPC
WSDA	193	1	17/38	2/3	0	2
Ecology	1	39	3/5	1	0	1
DOH	17/38	3/5	220/252	91/93	4/5	130
L&I Claims	2/3	1	91/93	93	3	13
WISHA	0	0	4/5	3	31	1
WPC	2	1	130	13	1	2430

* *Events include WSDA complaints by event, Ecology complaints by event, DOH incidents by people involved, L&I claims by people involved, L&I WISHA inspections by employer, and WPC calls by people involved. Where two numbers appear, the first number represents events and the second number represents people involved.*

It is difficult to aggregate PIRT data because each agency collects a different type of data. For example, data from the Washington State Department of Ecology (Ecology) Spills Program includes both actual environmental contamination and calls from concerned neighbors about the possible illegal use of pesticides that turn out to be legal. Data from WPC includes calls about human exposures with and without associated illness. Washington State Department of Agriculture (WSDA) data include actual violations, cases of crop damage, complaints about inadequate pest control inspections, and problems with licensing of pesticide applicators.

Highlighted Panel Activities and Issues for 2006

PIRT made 11 recommendations for collective and member agency action for 2006. Ongoing, mandated recommendations include review of member agencies' independent strategies to reduce pesticide incidents based on combined PIRT data, and reporting on product labels that are inadequate or unclear. Issues monitored by the PIRT panel in 2006 include:

- cholinesterase monitoring (page 237)
- pesticide drift (page 23)
- the Worker Protection Standard (page 24)
- a pilot project related to General Pesticide Rules (concerning notification of certain pesticide applications) (page 241)
- disclosure of inert ingredients on pesticide labels (page 245)
- West Nile virus (page 10)

PIRT Activities

Cholinesterase Monitoring

The Cholinesterase Monitoring Rule (Chapter 296-148 WAC) was implemented in February 2004 when Department of Labor and Industries (L&I) began the Cholinesterase Monitoring Program. Based on the report by L&I's Scientific Advisory Committee (SAC) *Final Report: Cholinesterase Monitoring of Pesticide Handlers in Agriculture: 2004-2006,* 1889 workers participated in the cholinesterase monitoring program during 2006. Workers who handle toxicity category I or II organophosphate or carbamate pesticides are eligible for monitoring if their number of handling hours is expected to exceed the threshold of 30 hours in 30 consecutive days, as defined by the rule. A baseline test was performed for each enrolled worker. A total of 693 periodic tests were performed for 471 workers who had reached the pesticide-handling hour threshold. There were a total of 57 alerts issued to workers at the workplace evaluation level and eight workers at the workplace removal level. Overall, the data indicate that 12 percent of enrolled workers had cholinesterase depression at the time of periodic testing during 2006.

Yakima PIRT Meeting

The PIRT panel met nine times in 2006. Each year, one meeting is held in eastern Washington to include members of the agricultural community. The June meeting was held in Yakima. This meeting is featured in this report because it was planned specifically for this audience and was well-attended by representatives of the farming community. Dr. David Kalman (University of Washington) gave an overview of the cholinesterase monitoring program and findings of the SAC. The agricultural community posed questions and concerns about upcoming changes to the monitoring program. Representatives from L&I and WSDA clarified their agencies' roles in enforcement of Worker Protection Standards. A Washington State Department of Health (DOH) representative gave a presentation on a National Institute of Occupational Safety and Health (NIOSH)

grant to investigate root causes of pesticide-related illness in the agricultural setting.

PIRT Letters of Endorsement and Recommendation

The PIRT panel sent four letters of support or recommendation in 2006. A copy of these letters can be found in Appendix F.

- PIRT submitted a letter in February supporting Dr. Matt Keifer's research proposal to NIOSH for identifying factors that make a pesticide handler susceptible to cholinesterase depression, and for reducing the cost and complexity of cholinesterase monitoring.
- In May, PIRT submitted a letter to Gary Weeks, director of L&I, expressing concerns about L&I's proposed changes to the cholinesterase monitoring program. Members recommended that L&I implement a long-term process to monitor quality of the cholinesterase program, and called for ongoing involvement of the Stakeholder and Scientific Advisory Committees and for continuing the publication of an annual report on cholinesterase monitoring.
- In June, PIRT requested an update from WSDA on a pilot project related to the General Pesticide Rule. The project would require notification of schools, hospitals, nursing homes, and day cares of nearby pesticide application.
- In December, PIRT sent a letter to the United States Environmental Protection Agency (EPA) in support of a petition sent by numerous states' attorneys generals. Petitioners identified 381 substances used as inert ingredients, listed as hazardous chemicals by various statutory authorities. The attorneys general urged the EPA to make regulatory changes requiring disclosure of these hazardous chemicals when used as inert ingredients. Members acknowledged that full disclosure of inert ingredients is not currently feasible, but recommended that the EPA work toward this in the near future.

Summary Data for PIRT Agencies

The following agency summaries identify key points from the analysis of 2005 pesticide incident data.

Department of Agriculture

In 2005, WSDA investigated 193 pesticide-related complaints. After investigation, it was determined that 117 (61%) involved pesticide applications and 71 (37%) were unrelated to actual applications. During 2005, 113 (59%) of WSDA complaint investigations resulted in some type of violation. Drift continues to be one of the most frequent types of complaint involving pesticide applications. WSDA received 76 complaints about drift in general and 22 complaints specifically about human exposure due to drift. Licensing and Structural Inspections are the most frequent non-pesticide application complaints. The other complaints concerned such issues as improper licenses and Wood

Destroying Organism inspections. In 2005, with the exception of drift, complaints covered more diverse topics than in previous years.

Department of Ecology

In 2005, Ecology investigated 39 pesticide-related complaints involving threats to air, water, or soil. Twenty-three complaints concerned threats to ground or surface water, 12 involved spills or fires, five involved unsafe pesticide storage and handling, and two involved pesticide disposal or waste concerns. Ecology is responsible for oversight of contaminated areas requiring cleanup or monitoring. During 2005, Ecology placed 11 new pesticide-contaminated sites on the Toxic Cleanup Program list. Ecology's Water Quality program is responsible for aquatic pesticide and mosquito control permitting, as detailed in Ecology's summary.

Department of Health

In 2005, DOH investigated 220 pesticide incidents involving 252 individuals. Of the 252 illnesses/injuries, 188 (75%) were classified as definitely, probably, or possibly (DPP) related to pesticide exposure.

Seventy-seven (31%) of the 2005 DPP cases were related to agriculture. Fifty agricultural cases were associated with the tree fruit industry, 21 with field crops and two with ornamental nurseries. The remaining four cases were not associated with applications to specific crops. Sixty-one agricultural cases involved agricultural workers. Of these, 28 workers were handling pesticides at the time of their exposure.

There were 111 non-agricultural DPP cases in 2005. Thirty-four of these occurred on the job (occupational) and 77 were non-occupational. Of the 34 occupational cases, 18 were handling pesticides at the time of exposure. Of the 77 non-agricultural, non-occupational exposures, 66 occurred in homes, six in roads or vehicles, four in businesses, and one in a park.

Department of Labor and Industries

L&I's Division of Occupational Safety and Health (DOSH) Services Division conducted 31 pesticide-related safety and health inspections in 2005. Twenty-six (84%) of the inspections resulted in general or serious citations being issued to the employer and five inspections did not involve citations.

In 2005, the L&I Insurance Services Division, Claims Administration Program received 93 claims which appeared to be related to pesticide illness and referred these to DOH. Of the 93 claims, 64 (69%) were compensated by L&I as being work related injuries and 29 were rejected. Sixty-four (69%) were related to agriculture and 29 were non-agricultural. DOH investigated the 93 claims and classified 41 agricultural and 29 non-agricultural claims (75% of all claims) as having signs or symptoms that were definitely, probably, or possibly related to the pesticide exposure.

Of the 41 DPP agricultural workers, 32 claims involved workers in the tree fruit industry, three involved the potato industry, and three were in nurseries or greenhouses.

Washington Poison Center

In 2005, WPC provided immediate professional medical advice regarding pesticide-related questions and emergencies to 2430 callers. Of the 2430 calls, 1347 involved insecticides and 137 involved insect repellents. Herbicides were involved in 457 of the calls. In 2005, 52 (2%) pesticide-related human exposure calls involved moderate or major health effects. Fifty (2%) calls involved intentional exposure. DOH screened all human pesticide-related illness calls to WPC and investigated 130 calls where the caller sought medical care and the exposure was not part of a suicidal gesture. One hundred of these involved illnesses determined to be definitely, probably or possibly related to pesticide exposure.

Summary Data

Table 2 summarizes 2005 pesticide-related data for each agency. Pesticide-related data from each agency are described in detail in the following Agency Summary Reports. Individual incident descriptions are provided in Appendix C.

Table 2. Individual Agencies' Summaries of Their Specific Pesticide Events, 2005

Department of Agriculture: 193 Complaints Resulting in 113 Violations			
Complaints	**193**	**Violations**	**113**
Location of Complaint		Violations by Type of Activity	
Eastern Washington	123	Agriculture	39
Western Washington	70	Commercial/industrial	36
		Structural Pest Inspection (SPI)	8
		Residential (homeowners)	4
Enforcement Actions*	116	Right-of-way	5
Notice of correction (NOC)	76	Other (license/records)	21
Notice of intent/Admin action (NOI)	23		
Advisory letter/Warning letter	9	License Involved with Violations	113
Referred	2	Commercial applicator	27
Verbal warning	6	Unlicensed	32
		Private applicator	23
* No action indicated	77	Structural Pest Inspection	17
		Public operator	7
		Other (Dealer, Private Commercial)	7
Department of Health: 220 Incidents Involving 252 Individual Cases			
Type of Incident	**220**	**Classification of Cases**	**252**
Agriculture	83	Definite	49
Residential	90	Probable	48
Commercial/Industrial	30	Possible	91
Other	17	Suspicious	9
		Unlikely	10
		Insufficient information	44
		Unrelated	1
Childhood Cases ≤ 18 years old	**32**	**Definite, Probable or Possible Cases**	**188**
Definite, Probably or Possible Cases	22	Agriculture	77
		Non-Agriculture	111
Department of Labor and Industries: 31 Industrial Safety and Health Inspections 101 Worker Compensation Claims			
Pesticide-related Inspections	**31**	**Worker Compensation Claims**	**93**
Serious and/or General Citations	26	Agriculture	64
No citations	5	Non-Agriculture	29
Type of Business	31	**Benefits**	
Orchard	8	Accepted – Medical/time loss	64
Nursery	6	Rejected	29
Other agricultural	5	Pending	0
Forestry	4		
Wheat	3		
Non-agricultural	5		
Department of Ecology: 39 Pesticide Complaints (Complaints may involve more than one category)			
Threats to ground or surface water	23		
Spills or fires	12		
Pesticide disposal or waste concerns	2		
Unsafe pesticide storage or handling	5		
Washington Poison Center: 2430 Human Exposure Pesticide-Related Calls			
DOH-identified calls for investigation	130		

Introduction

Created in 1990, the PIRT Review Panel continues to protect citizens against pesticide exposure through the understanding of incident causes and by developing prevention strategies.

The Pesticide Incident Reporting and Tracking (PIRT) Review Panel was created by RCW 70.104.090 to monitor pesticide-related incidents that have suspected health or environmental effects. The PIRT panel consists of representatives of Washington State Departments of Agriculture (WSDA), Ecology (Ecology), Health (DOH), Labor and Industries (L&I), Natural Resources (DNR), and Fish and Wildlife (WDFW), representatives of the University of Washington, Washington State University, and Washington Poison Center (WPC), a practicing toxicologist, and a member of the public (Appendix A).

Member agencies and the WPC conduct pesticide incident investigations in accordance with their specific statutory responsibilities and report findings to the PIRT panel for evaluation. The PIRT panel is mandated to perform the following activities:

- Centralize the receipt of information regarding pesticide complaints and their investigations and monitor timeliness of agencies' response to complainants.
- Review and make recommendations for procedures for investigation of pesticide incidents.
- Identify inadequacies of pesticide regulations to protect public health.
- Submit an annual report summarizing pesticide incidents to the legislature.

The PIRT panel has no regulatory authority but acts in an oversight capacity to the six agencies and makes recommendations to the agencies, to the legislature, to the Governor, and to the federal Environmental Protection Agency (EPA).

This 2006 report is the PIRT panel's fifteenth annual report. It summarizes pesticide-related incident reports, complaints or calls to WSDA, DOH, Ecology, L&I, and WPC. The report:

- Provides analyses of each agency's incidents and follow-up activities for 2005.
- Describes PIRT panel and member agency activities for 2006.
- Describes how pesticide-related calls, complaints, incidents, and investigations overlap between agencies.

Combined Agency Data

The number of events (defined as complaints, inspections, claims or calls) reported to agencies and calls made to WPC for the years 2001-2005 are listed in Table 3.

Table 3. Pesticide Events Reported to Agencies and WPC, 2001 – 2005

	2001	2002	2003	2004	2005
WSDA Complaints	225	255	222	200	193
Ecology Complaints	35	46	33	29	39
DOH Events DOH	200	216	242	245	220
Individuals Involved	250	270	275	269	252
WISHA Inspections	27	64	22	43	31
L&I Claims	129	109	133	101	93
WPC Calls	2171	2043	1937	2342	2430

Overlap of Pesticide-related Events by Agency

Each agency's responsibility for responding to reports of pesticide-related incidents is outlined as follows:

- WSDA investigates complaints about misuse or misapplication, licensing, and structural inspections. WSDA enforces the language on pesticide labels and coordinates with L&I Division of Occupational Safety and Health (DOSH) to enforce the Worker Protection Standard (WPS) for agricultural workers.
- Ecology investigates and enforces remediation of incidents involving spills or environmental contamination by pesticides.
- DOH investigates reported cases of suspected pesticide-related illness.
- L&I DOSH conducts safety and health workplace inspections in agriculture/industry and investigates employee complaints and referrals from agencies and others. With WSDA, DOSH enforces the WPS for agricultural workers. DOSH also enforces other workplace safety rules.
- L&I Claims Insurance Services Division adjudicates and administers worker compensation insurance claims related to pesticide exposures.
- WPC provides information and medical advice to the public and to health care providers who call about pesticides.

Pesticide-related cases are referred between PIRT agencies when appropriate. For instance, if a WSDA investigation into a pesticide label violation finds an ill worker, the case is referred to DOH. If a DOH investigation finds a label or safety violation, it is referred to WSDA or L&I DOSH. L&I claims related to pesticide-exposure are reported to DOH. These referrals result in overlapping agency data for cases involving pesticide-related illness.

As the state agency responsible for investigating cases of pesticide-related illness, DOH has formal arrangements with L&I, WSDA, and WPC to receive reports of suspected pesticide-related illnesses and injuries. With these arrangements, DOH data are the most reflective of human pesticide-related illness in the state.

Aggregation of PIRT Data

The overlap in pesticide-related cases between agencies for 2005 is illustrated in Table 4 and Figure 1. The shaded cells in Table 4 show the total number of incidents reported to the PIRT panel by each agency. The white cells indicate the numbers of incidents reported by multiple agencies. Where two numbers appear in the cells, the first number represents the number of events and the second number represents the number of people involved. For example, WSDA responded to 193 complaints about incidents involving a pesticide application. The Ecology Spill Response Program investigated one incident from WSDA. DOH co-investigated 17 incidents from WSDA incidents involving 38 human illnesses. In two incidents, three workers filed an L&I claim. Two incidents were reported to WPC.

Table 4. Overlap of Pesticide-Related Events* by Agency, 2005

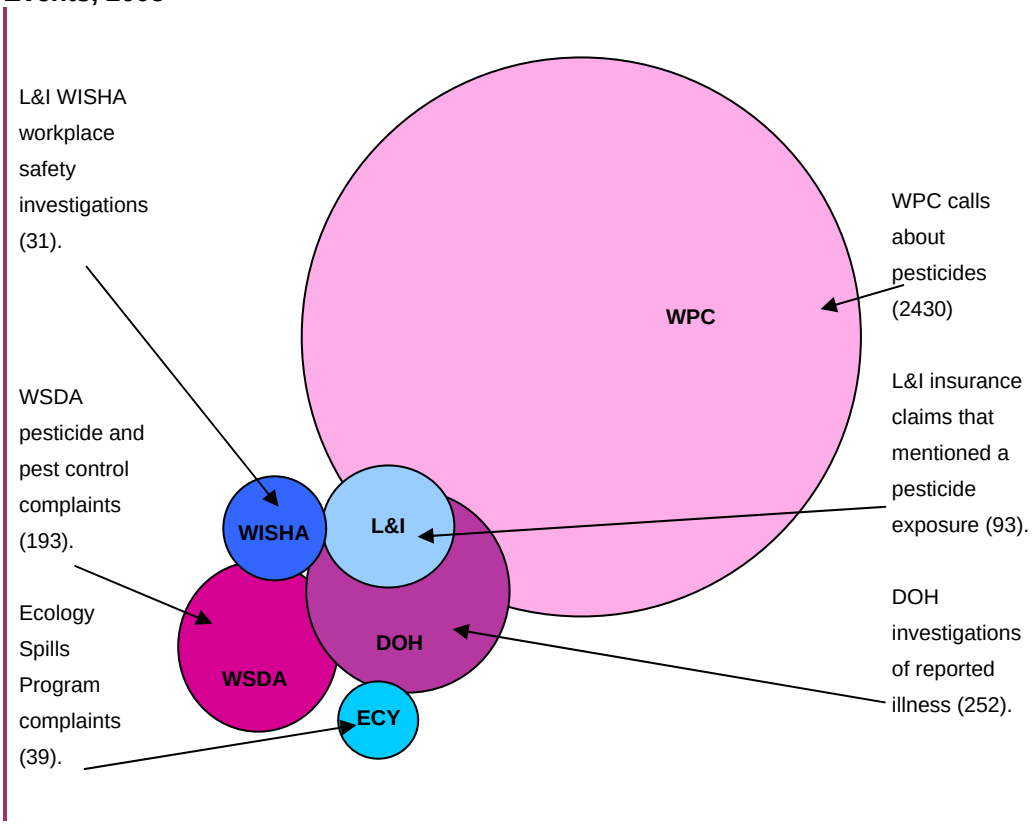
	WSDA	Ecology	DOH	L&I Claims	WISHA	WPC
WSDA	193	1	17/38	2/3	0	2/2
Ecology	1	39	3/5	1/1	0	1/1
DOH	17/38	3/5	220/252	91/93	4/5	130
L&I Claims	2/3	1/1	91/93	93	3/3	13/13
WISHA	0	0	4/5	3/3	31	1/1
WPC	2/2	1/1	130	13/13	1/1	2430

* *Events include WSDA complaints by event, Ecology complaints by event, DOH incidents by people involved, L&I claims by people involved, L&I WISHA inspections by employer, and WPC calls by people involved. Where two numbers appear, the first number represents events and the second number represents people involved.*

It is difficult to aggregate PIRT data because each agency collects a different type of data. For example, Ecology Spills Program data include information on actual environmental contamination and on calls from concerned neighbors about pesticide use that turned out to be legal after investigation. Data from WPC includes calls about human exposures with and without associated illness. WSDA data include actual violations, cases of crop damage, complaints about inadequate pest control inspections, and problems with licensing of pesticide applicators.

Figure 1 illustrates how PIRT agency datasets overlap for 2005. The figure is not drawn to scale. The WPC circle is large because WPC receives many calls for general information on pesticides. The number of calls to WPC concerning actual pesticide-related human exposures is relatively few.

Figure 1. Overlap of PIRT Member Agencies Pesticide Related Events, 2005



Strengths and Limitations of PIRT Data

The strengths and limitations of PIRT data were discussed in depth in the 2004 Annual Report (pages 21-26). The limitations of state comparisons of pesticide-related illnesses are also discussed in the 2004 Annual Report. The 2004 Annual Report is available on the PIRT Web site at http://www.doh.wa.gov/ehp/ts/PIRT/pubs-pirt.htm.

Agency Response Times

Revised Code of Washington 70.104.080 (Appendix A) specifically directs the PIRT panel to monitor agency response time to pesticide-related incidents for the departments of Agriculture, Health, and Labor and Industries. Response time is defined as the interval between initial report of an incident and an agency's first response to the report. The first response may be a phone call, a request for medical or spray records, or other agency action. Agency response times for 2005 are listed in Table 5.

Table 5. Agency Response Times, 2005

Agency Mandates	Agency Response Times
Agriculture • Immediate response when complaints involve humans or animals • All other complaint investigations must be initiated within 48 hours	• 100% of human exposure cases within 24 hours • 96% of all cases within 24 hours
Ecology ▪ No legislative mandate for response time.	▪ 67% of the 39 cases responded to within 24 hours ▪ 18% had unknown incident dates ▪ 13% had greater than 24 hour response time
Health • Hospital admission, death, or threat to public health within 24 hours • All others within 48 hours	• The one severe report within 24 hours • 96% within 48 hours
Labor and Industries (WISHA) • Serious complaints within 30 days • All others within 120 days	• Majority within 30 days • All within 120 days

PIRT Panel Activities

The PIRT Annual Report summarizes the activities of the PIRT Review Panel and member agencies for 2006.

Background

The PIRT (PIRT) Review Panel met nine times in 2006. PIRT monitored each agency's response time to incidents (see Combined Agency Data, page 16) and actions stemming from recommendations made in previous years. PIRT also analyzed incident data to identify trends and patterns of problems related to pesticides, and responded to requests for special activities from the panel members.

PIRT adopted the following recommendations in 2006 for Panel action and member agency action.

Recommendations to the PIRT Review Panel and Member Agencies for 2006

All of these Action Recommendations are ongoing, and will be carried forward to 2007.

Recommendation 1	*PIRT Review Panel and member agencies will continue to report on actions taken in response to findings from the DOH investigations into under-reporting of pesticide-related illnesses.* *Lead: Dorothy Tibbetts/Cynthia Lopez*

Department of Health

In the 2005 PIRT Report, Department of Health (DOH) Pesticide Program staff recommended changes in ongoing efforts to improve reporting of pesticide-related illness by health care providers. These changes include increasing health care providers' (HCP) awareness of the requirement and outcome of their reporting, and providing clinicians with an easier and more efficient means of reporting pesticide related illness. In 2006, DOH continued outreach and education to health care providers and communities, and focused on refining the development of electronic means of pesticide-related illness reporting.

In June, DOH Pesticide staff visited 31 health care providers in 12 eastern Washington counties at 20 hospital emergency rooms. During these contacts, DOH staff reminded providers that suspected pesticide-related illness is a Notifiable Condition. Materials were distributed, including: the latest revision of the Environmental Protection Agency (EPA) publication *Recognition and Management of Pesticide Poisonings*, examples of DOH pesticide brochures with instructions for ordering more on line, journal articles which DOH co-authored on pesticide illnesses among emergency responders and reported side effects of lindane lice products, and a brochure from University of Washington PNASH

(Pacific Northwest Agricultural Safety and Health). In addition, DOH staff demonstrated online professional resources for providers regarding identification of pesticides, evaluation of patients by conducting exposure histories, and use of the DOH Notifiable Conditions website (www.doh.wa.gov/notify/nc/pesticide.htm). Providers' emails were obtained for use in follow-up.

In June and July, DOH Pesticide Program staff made presentations to health care providers at three clinics in Yakima, Wenatchee, and Sunnyside. The importance of obtaining exposure history in the clinical setting with case examples was reviewed, and the DOH Pesticide Program was explained. DOH staff emphasized the significance of reporting pesticide-related illness as a Notifiable Condition. Other outreach and education activities by DOH Pesticide Program staff included staffing a pesticide education and safety exhibit at the annual WA Health Foundation Latina Health Fair in Seattle, providing pesticide education and safety exhibits at Commission on Hispanic Affairs meetings (bimonthly) in eastern and western Washington, and giving a presentation to Labor & Industry's Chemically-Related Illness Program staff.

A continuing effort is being made to have educational materials in both English and Spanish provided to patients, health care providers, and growers during DOH surveillance investigations.

Electronic reporting implemented in 2005 continues to bring both WPC and L&I referrals to the DOH Pesticide Program. The database that handles confidential information from the WPC was enhanced in 2006 to allow for improved data extraction on symptomatic pesticide exposures for which no medical care is sought. These are cases not currently investigated and summarized by DOH. The enhancement will allow DOH to better summarize all pesticide exposures of concern, gather data on the target pest involved, and prioritize educational efforts on safer pest control for specific pests.

Other Electronic Reporting Projects

DOH and Washington Environmental Public Health Tracking Network have partnered with Inland Northwest Health Services (INHS) to explore the feasibility and usefulness of obtaining electronic reports of pesticide illness cases from emergency department data based on pesticide-related ICD-9 CM codes. The purpose of this pilot project is to determine: a) whether this method of obtaining reports will increase the completeness and timeliness of pesticide illness reporting, and b) what would be required institutionally and technically to automatically provide these data to DOH. To date, INHS has deployed the technical tools needed for case extraction and secure automated electronic transmission of the data to DOH. Test data have been successfully transmitted in HL7 format via the DOH Public Health Reporting of Electronic Data system.

Recommendation 2

DOH will provide updates to PIRT on activities related to the NIOSH funded project "Identifying preventable causes of pesticide-related illness among agricultural workers."

Lead: Dorothy Tibbetts/Cynthia Lopez

In July of 2005, DOH received funds from NIOSH to conduct a five-year study entitled *Identifying Preventable Causes of Pesticide-Related Illness Among Agricultural Workers.* The purpose of this study is to identify and track existing pesticide risks to workers in the agricultural sector by expanding DOH case investigations and analysis of specific, common exposure scenarios, including drift and exposures due to inadequate personal protective equipment practices. DOH will use the information derived from this effort to critically evaluate the adequacy of existing programs and policies, and to modify and expand current outreach efforts to address gaps in its prevention activities.

In June 2006, a DOH representative presented to the PIRT panel on the results of year one grant activities. In year one, DOH Pesticide Program staff tested a new set of coding to track preventable causes of reported illness. In 2003 through 2004, there were 131 occupational exposures associated with agricultural pesticide use (the data set included Definite, Probable, Possible, and Suspicious cases). The two leading exposure factors were problems with personal protective equipment (PPE) and pesticide drift. Forty-six of the 131 cases (35%) were either missing a required piece of PPE or were wearing PPE improperly. Factors associated with lack of required PPE included: wearing sunglasses or regular prescription glasses instead of approved eye PPE, lack of training/supervision of handlers, and handler unaware of any PPE provided by employer. Year two work will focus on exploring the root causes of PPE problems with follow-up research interviews. The research interviews will be conducted by DOH staff outside the Pesticide Program and will test sensitive questions about root cause that the program will consider adding to their interviews in subsequent years.

Agricultural drift continued to be a problem for workers and nearby residents. There were 13 agricultural drift incidents associated with 30 DDP illnesses or injuries in 2005. Drift data are described in detail on page 79. Insecticides, such as chlorpyrifos and azinphos-methyl, and fungicides, such as copper hydroxide and sulfur based products were most commonly associated with reported illness. The majority of incidents were associated with ground sprayers in tree fruit operations. Few other underlying factors for drift were identified from DOH investigations. WSDA, DOH, and L&I will collaborate in 2007 to develop a common checklist to be used in drift investigations. These will include: more detail on type of equipment and equipment settings, more detail on local weather conditions, distance of documented drift, use of drift retardant in the tank mix, and use of best management practices in the application. The goal of this joint effort is to collect data to support adoption of new technologies and best management practices.

Recommendation 3

PIRT will obtain and review data from WSDA and other sources to evaluate Washington Schools' compliance with tracking and pesticide usage requirements, including requirements pertaining to 1) central collection of annual pesticide use reports, and 2) dissemination of information about tracking requirements and tracking tools to school districts.

Lead: Steve Gilbert

At the November 2006 PIRT meeting, WSDA's *Summary of WSDA Authority and Activities in Schools Related to Pesticide Use* was distributed to the PIRT panel. The document gives a synopsis of results of pesticide-use inspections of 116 school districts in 2006, with information on school districts' level of compliance for pesticide tracking and usage requirements. In addition, the summary cites factors that have contributed to safer pesticide use in schools and makes recommendations to the Washington State Board of Health (WSBOH) for improving the system for school pesticide usage.

This will serve as a valuable resource for further work on evaluating schools' compliance with pesticide tracking and usage requirements in 2007, and for PIRT to comment on the WSBOH draft rule on school environmental health in 2007.

Recommendation 4

PIRT panel will assemble recommendations to EPA on revision of the Worker Protection Standard (WPS).

Lead: Pam Edwards

PIRT received preliminary draft documents on the WPS from the EPA, which were unavailable for public discussion. PIRT will formulate and submit recommendations for revisions to the EPA during the public comment period in 2007.

Potential regulatory changes include:

- Strengthening the worker training provisions including content, grace period, retraining interval, trainer requirements, and verification system.
- Establishing a hazard communication program for workers including training and field notification and possible changes to the central posting requirements.
- Reconsidering the retaliation provisions of the WPS.
- Expanding the scope of the applicator rules to include all individuals that mix, load or apply any pesticide as part of their occupation, including licensing handlers as currently defined in the WPS.

Under WPS, the PIRT panel also discussed inert ingredients and labels, since those can and do affect appropriate personal protective equipment and pesticide illness emergency response and treatment. Discrepancies between the material safety data sheets and product labels can also create problems in medical treatment. The Panel also reviewed what seems to be a possible trend toward the requirement of long-sleeved shirts and pants as PPE. These items are specifically exempt from the WPS and do not have to be supplied by the employer, thus shifting the cost burden to the employee.

Recommendation 5

PIRT panel will collect and review incident data related to the tree fruit industry to identify trends and recommend prevention strategies. Findings will be summarized in the 2006 Annual Report.

Lead: Dorothy Tibbetts/Cynthia Lopez

In 2005, as in past years, the leading crops associated with reported pesticide exposure cases are tree fruits, one of the primary agricultural sectors of the state economy. These are labor intensive crops requiring workers to be thinning, pruning, or harvesting during the same times of year that pesticides are applied. Tree fruit industry pesticide incidents are detailed in the DOH section of this report.

A report by the L&I-convened Science Advisory Committee, *Final Report on Cholinesterase Monitoring of Pesticide Handlers in Agriculture: 2004 – 2006* (http://www.lni.wa.gov/Safety/Topics/AtoZ/Cholinesterase/files/2004-06ChESACreport.pdf) found that the majority of serum cholinesterase depressions coincide with heavy pesticide use periods for chlorpyrifos and other related agents. The vast majority of depressions were from orchard fruit operations using airblast pesticide application methods. The number of pesticide handling hours is not a good predictor of pesticide overexposure. Other factors such as type, concentration and formulations of pesticides used, splash incidents, PPE use, and personal behaviors during pesticide handling influence cholinesterase activity.

During the panel discussion on the cholinesterase monitoring rule at the June 2006 PIRT meeting in Yakima, members of the agricultural community gave their observations on factors contributing to pesticide overexposure. Details can be found under in the section on Eastside PIRT Meeting in Yakima, page 28.

Recommendation 6

PIRT will continue to compile data related to drift and report on member agencies' drift reduction efforts. PIRT will continue to work on setting up a Washington Symposium on Drift.

Lead: Ann Wick

Highlight on Pesticide Drift, page 79, presents detailed drift data and analyses for 2004 and 2005.

At the PIRT panel's suggestion, Washington State University (WSU) and WSDA sponsored a workshop on application technologies for tree fruit. The Orchard Spray Application Field Forum took place in Cashmere, Washington on March 31, 2006. The workshop, which included a demonstration of an airblast sprayer, highlighted the challenges and limitations associated with current technology related to pesticide drift.

In 2006, WSDA, WSU, and the Tree Fruit Research Commission developed plans to hold a Washington Symposium on Spray Drift Labeling for Orchards in spring 2007. This meeting will be highly publicized, and numerous interested parties and stakeholders are invited to attend. During last year's Orchard Spray Application Field Forum, pesticide labels and state restrictions generated significant dialogue. The intent of the 2007 orchard drift symposium will be to evaluate issues related to label drift statements, state regulations, and how they are enforced in Washington. The tentative agenda includes presentations by an EPA product manager to discuss risk mitigation language. A chemical company product manager will present additional language requested on labels to ensure efficacy and protect from liability. WSDA will present its enforcement responsibilities and policies related to state regulations and label compliance.

WSDA is also working with WSU to provide better support to Washington aerial applicators so they can pattern test their aircraft annually. Cliff Weed (Pesticide Management Compliance Manager, WSDA) and Carol Ramsay (Pesticide Education Specialist, WSU) are in the process of garnering funds to purchase DropScan for pattern testing and assessing droplet spectra released from aircraft. WSU is also seeking additional funds to update the fluorometer owned by University of Idaho for spray pattern testing. In 2007, WSU will be participating in 2007 fly-in clinics to become more knowledgeable. WSU and AWAA (Association of Washington Aerial Applicators) plan to host a multi-day fly-in clinic. Dr. Dennis Gardisser, an expert on aerial agricultural chemical application, has been invited to participate in the equipment configuration assessments.

Recommendation 7

The PIRT panel will review and report on member agencies' independent strategies to reduce pesticide incidents based on the combined PIRT data.

Lead: Dorothy Tibbetts/Cynthia Lopez

In 2006, each PIRT agency conducted pesticide incident prevention activities. Details of these activities are listed in agency's Prevention Activities Section in the following Agency Summary Reports.

During the November PIRT meeting, DOH, and WSDA highlighted some of their prevention efforts for the PIRT panel, as follows. The DOH Pesticide Program website has been enhanced for health care providers to better support recognition and management of pesticide-related illnesses. WSDA educates the general public outside of the agricultural community about safe pesticide use and promptly posts web information on pertinent pesticide issues. WSDA is working on displaying current pesticide application licenses online, to ensure that only properly licensed applicators can obtain and apply the most harmful pesticides.

In addition, WSDA worked in conjunction with WSU to construct a new urban Structural Pest Management Research and Demonstration facility, the only training structure of its kind in the western United States. The facility will provide pest managers and inspectors with hands-on experience identifying wood destroying organisms, the types of damage they cause, and conditions that favor infestation.

Several PIRT agencies (WSDA, Ecology, DOH, and WSU) also worked together on creating a web resource to improve safety of insect control around the home. This new module joins a module on integrated pest management in schools on the Urban Pest Education Strategy Team (UPEST) website at http://www.ecy.wa.gov/programs/swfa/upest/household.html.

Recommendation 8

PIRT will continue to review the activities of the Medical Monitoring program for agricultural workers who handle cholinesterase-inhibiting insecticides.

Lead: Dorothy Tibbetts/Cynthia Lopez

The activities of the Cholinesterase Monitoring Program for 2006 are described in detail in the L&I Section of this report. There were periodic updates on the program at PIRT meetings throughout 2006. In May, 2006, the panel wrote a letter to Gary Weeks, director of L&I, with recommendations on L&I's proposed changes to the monitoring program in 2007. This letter can be found in Appendix F.

Recommendation 9

PIRT will continue to monitor for any increase in pesticide incidents related to control of mosquitoes.

Lead: Dorothy Tibbetts/Cynthia Lopez

In 2006, there were three confirmed human cases of West Nile Virus (WNV) that were acquired in Washington State, the first such cases found in the state. In addition, six horses and 13 birds were reported positive for WNV by the Zoonotic Disease Program, the DOH program responsible for tracking WNV. There were no WNV-positive mosquito pools this year.

The DOH Pesticide Program tracks illnesses associated with control of community disease vectors and incidents involving repellents. This allows DOH to identify pesticide illness cases specifically associated with West Nile virus control efforts. A DOH database query brought up six mosquito events in 2005. Table 6 summarizes DOH cases associated with mosquito control, from 2002 through 2005.

Table 6. DOH Cases* Associated with Mosquito Control, 2002 – 2005

	2002	2003	2004	2005
Adult mosquito control	3	4	2	4
Larval mosquito control	0	0	0	0
Mosquito repellent	1	6	4	2

** Limited to cases of illnesses classified by DOH as definitely, probably or possibly due to pesticide exposure. See Appendix B for more information on the DOH classifications.*

There may be an increase in repellent incidents in upcoming years as West Nile Virus follows the same course as it has in other states. WPC has more repellent cases than DOH, as their database also includes incidents where people don't see health care providers.

Recommendation 10

PIRT members will continue to report on possible instances of unclear labeling of pesticide product labels. WSDA will clarify or forward unclear federal labels to EPA for response.

Lead: Ann Wick

Recommendation 10 is ongoing, and will be carried forward to 2007.

Recommendation 11

The PIRT panel will identify available data on residential and agricultural pesticide use. PIRT will examine and report on the costs and benefits of gathering this data.

Lead: Steve Gilbert

Steve Gilbert provided information to the PIRT panel on data sources for pesticide use/purchase information and on the website for Oregon State Department of Agriculture's Pesticide Use Reporting System (PURS). Oregon's website will be a good resource for Washington, as the two states have demonstrated similar pesticide usage. He will present the data from Oregon in early 2007.

Other Panel Activities for 2006

Eastside PIRT Meeting in Yakima

The June meeting in Yakima is highlighted because is it planned for and highly attended by the agricultural community. At this meeting in Yakima, Dr. Dave Kalman, chair of the Cholinesterase (ChE) Scientific Advisory Committee, gave an overview of the Cholinesterase Monitoring Rule and a synopsis of data obtained from the cholinesterase monitoring program and analyzed by the Scientific Advisory Committee. Representatives of the agricultural business and farm worker communities attended the meeting. The ensuing discussion provided an opportunity to share their perspective on factors contributing to cholinesterase

depression. Participants emphasized the need for improvements in training and oversight related to safety procedures. They related stories of improper or inadequate use of PPE, such as reuse of contaminated clothing after the worker experienced a cholinesterase depression. Problems with use of respirator filters were identified: pesticide handlers did not use a filter or did not change one when necessary, used an incorrect filter for the application, or didn't know how to take the respirator apart to clean it. Since these incidents are common in the agricultural community, it would be helpful to have a central place to aggregate this information. Workers should also have ongoing instruction on the purpose of cholinesterase monitoring and what it entails, and should receive their test results.

Other suggestions focused on having farm workers and the Hispanic communities take a more active role in training and decision making. For example, a bilingual pesticide safety instructor or investigator may encounter more barriers in training than a person born in the Hispanic culture. One of the larger agricultural companies employs a dedicated trainer of Hispanic origin, who is familiar with L&I and WSDA standards. This company has had a low rate of cholinesterase depression.

Panel members noted that the decrease in the number of program participants in 2006 could be related to many factors including: decreased use of organophosphates by growers, decreased organophosphate handling hours, workers not perceiving an ongoing benefit of the testing program, worker concern about confidentiality, employers not perceiving a benefit, and not encouraging employees to participate. Panel members and other meeting participants expressed concern about transferring cholinesterase testing from the Washington State Public Health Lab in 2007 to a private laboratory, and its effect on analytical quality, consistency, and cost of blood work.

An important benefit of the monitoring program is that it has helped to identify existing problems with worker training. There has been an improvement in workplace handling over the past three years. There are many challenges associated with determining the cause of depressions.

Additional topics from the June meeting include:

- Clarification of WSDA and L&I roles in the Administration of the Worker Protection Standard, presented by Cliff Weed (WSDA) and Gabrielle Toutonghi (L&I), giving information on the roles and responsibilities of their agencies regarding the administration of the Worker Protection Standard.
- DOH Year One Progress on Study on Preventable Causes of Farmworker Illnesses, presented by Barbara Morrissey (DOH), describing the Pesticide Program's first year findings from a NIOSH-funded grant for identification of the preventable causes of farm worker illnesses.

Presentation from Mark Calkins on Meeting Laws and Procedures Relevant to PIRT

At the October 19, 2006 PIRT meeting, Mark Calkins, Assistant Attorney General for DOH, presented resources to help PIRT understand meeting laws, make decisions, and run more efficient and effective meetings. Mr. Calkins, who has extensive experience with laws governing state agency boards and commissions, gave an overview of meeting laws and procedures relevant to PIRT, including the Open Public Meeting Act (OPMA) and RCW 70.104, which created PIRT.

He also provided the following: Overview of Meeting Laws and Procedures Relevant to PIRT (with questions and answers for commonly encountered issues for meetings and actions by advisory boards and commissions - as applied to the PIRT), the Condensed Robert's Rules of Order (to promote fairness, consistency, and efficiency in the conduct of meetings) and Suggested Guidelines for Meeting Minutes. PIRT approved the latter two documents for use as official guidelines for conducting future meetings.

Earlier in the year, Mr. Calkins wrote a memo to PIRT clarifying the Panel's Scope of Authority when PIRT makes recommendations and statements of support on pesticide issues.

Letter of Support for Dr. Matt Keifer's Research on Causes of Cholinesterase Depression

PIRT wrote a letter in support a research proposal for NIOSH submission by Dr. Matt Keifer, Associate Professor at University of Washington's Department of Occupational and Health Sciences. The purpose of the study was to identify factors that put pesticide handlers at risk for cholinesterase depression. The study will also be looking at whether a genetic factor predisposes a worker to cholinesterase depression. Researchers will compare the importance of various parameters in causing cholinesterase to be depressed, and will be analyzing the data throughout the four-year study to give feedback to the workers, growers, and clinics.

A second study will evaluate the use of a portable cholinesterase testing kit to potentially replace the laboratory methodology, and develop methods to verify whether an identified depression is a true depression or an artifact. It is hoped that this project will reduce the cost and complexity of cholinesterase monitoring. The Pacific Northwest Agricultural Safety and Health Center, which Dr. Keifer co-directs, will be working with clinics that supply cholinesterase services, agricultural growers and workers.

A copy of this letter is in Appendix F.

Letter to L&I on Recommendations for Cholinesterase Monitoring Program

The PIRT panel submitted a letter to Gary Weeks, director of L&I, expressing concerns about the department's proposed changes to the cholinesterase monitoring program. L&I planned to end its practice of focused investigation of workplaces where employees have had a potential overexposure to pesticides, and to transfer cholinesterase analytical testing from the state public health laboratory to a private laboratory. PIRT members felt that these changes would,

for a number of reasons, compromise the monitoring program's ability to recognize and correct causes of overexposure to cholinesterase-inhibiting pesticides. The Panel recommended that L&I implement a long-term process to monitor quality of the cholinesterase program, with six specific core activities for accomplishing this. The letter also called for ongoing involvement of the Stakeholder and Scientific Advisory Committees, and for continuing publication of an annual report on cholinesterase monitoring.

A copy of this letter is in Appendix F.

Letter Requesting Update on Pilot Project Related to Modification of General Pesticide Rules WAC, 16-228

In June 2006, PIRT sent a letter to WSDA requesting an update on the status of a pilot project related to a proposed modification to the General Pesticide Rule, WAC 16-228. The modified rule would require notification of aerial, airblast, fumigation or overhead pesticide use when the application site is within one mile of schools, hospitals, nursing homes, and adult and child daycare facilities. This was a follow up to a letter the PIRT sent in 2005 to WSDA, endorsing adoption of this modification to the General Pesticide Rules.

A copy of this letter is in Appendix F.

Letter to EPA Administrator: Support for petition to disclose inert ingredients on pesticide labels

In August 2006, the Attorneys General of 15 states submitted a petition to the EPA requesting that the agency modify its rules on pesticide labeling to require that manufacturers disclose inert ingredients in their products. Currently, pesticide manufacturers need only reveal the active ingredients in their formulations. Petitioners identified 381 substances used as inert ingredients, listed as hazardous chemicals by various statutory authorities. The attorneys general urged the EPA to make regulatory changes requiring disclosure of these hazardous chemicals when used as inert ingredients. If the EPA cannot or will not require this, the petition requests that the agency act on some subset of these chemicals.

PIRT sent a letter to the EPA in support of this petition, acknowledging that full disclosure of inert ingredients is not currently feasible, but recommending that the EPA work toward this in the near future. Disclosure of ingredients is important for health professionals in diagnosing illnesses related to pesticide exposure, for ensuring data quality in states that track pesticide-related health issues, and because pesticide consumers have a right to know what they are purchasing and using.

A copy of this letter is in Appendix F.

Agriculture

Washington State Department of Agriculture's summary of pesticide-related complaint investigations during 2005.

Background

The Pesticide Management Division of the Washington State Department of Agriculture (WSDA) protects human health and the environment by ensuring the safe and legal distribution, use, and disposal of pesticides in Washington State.

WSDA investigates all complaints it receives concerning possible pesticide misuse, storage, sales, and distribution; applicator licensing; and, building structure inspections for wood destroying organisms. The agency also inspects marketplaces, importers, manufacturers, and pesticide application sites for compliance with state and federal laws and regulations.

Complaints

During 2005, WSDA investigated 193 complaints (Table 7). After investigation, WSDA determined that 117 (61%) complaints involved pesticide applications and 71 complaints (37%) were unrelated to actual applications. In the remaining five complaints, the application status was unknown. Examples of complaints unrelated to applications are structural inspection or licensing complaints. There were 113 violations associated with the 193 complaints. Two of the 193 cases were referred to other enforcement agencies for action. Appendix C lists all WSDA pesticide-related complaint investigations for 2005.

Table 7. WSDA Complaints and Violations, 2001 – 2005

Year	Total Complaints	Violations
2001	225	152 (68%)
2002	255	169 (66%)
2003	222	151 (68%)
2004	200	122 (61%)
2005	193	113 (59%)

Location of Complaints

There were significant differences in population, types of pest problems, and the nature of complaints between the eastern and western portions of the state. In general, western Washington complaints were about structural pest inspections (SPI), homeowner complaints about drift, intentional misuse, and complaints about unlicensed applicators. In 2005, the number of complaints investigated for SPI's decreased significantly from previous years. Most eastern Washington complaints were about agricultural applications and drift. Drift continues to be one of the most frequent types of complaint involving pesticide applications. Licensing and Structural Inspections were the most frequent non-pesticide application complaints. With the exception of drift, complaints in 2005 covered more diverse topics than in previous years.

In 2005, 123 (64%) of complaint investigations occurred in eastern Washington and 70 (36%) in western Washington. Four complaints were from multiple counties in western Washington and one complaint was from multiple counties in eastern Washington. Figure 2 shows the number of complaints by county for 2005.

Figure 2. Number of WSDA Complaints by County, 2005

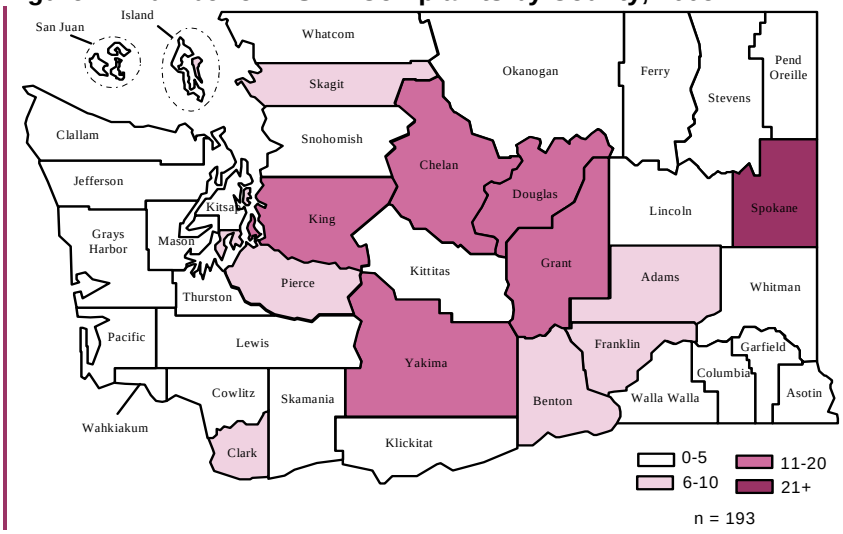


Table 8 lists the counties with the most complaint investigations from 2001 through 2005.

Table 8. WSDA Counties with the Most Complaints, 2001 – 2005

2001		2002		2003		2004		2005	
King	21	Spokane	28	King	23	King	28	Spokane	22
Grant	20	King	27	Pierce	22	Grant	20	King	20
Spokane	20	Yakima	26	Grant	19	Spokane	17	Chelan	18
Yakima	18	Thurston	17	Spokane	19	Benton	15	Grant	16
Benton	13	Pierce	17	Yakima	13	Yakima	15	Yakima	12
Pierce	12	Chelan	16	Benton	12	Walla Walla	11	Douglas	11
Lewis	11	Grant	16	Chelan	12	Pierce	11	Pierce	10
Thurston	10	Multiple	9	Clark	11	Snohomish	10	Benton	8
				Multiple	10	Chelan	8		

Response Time

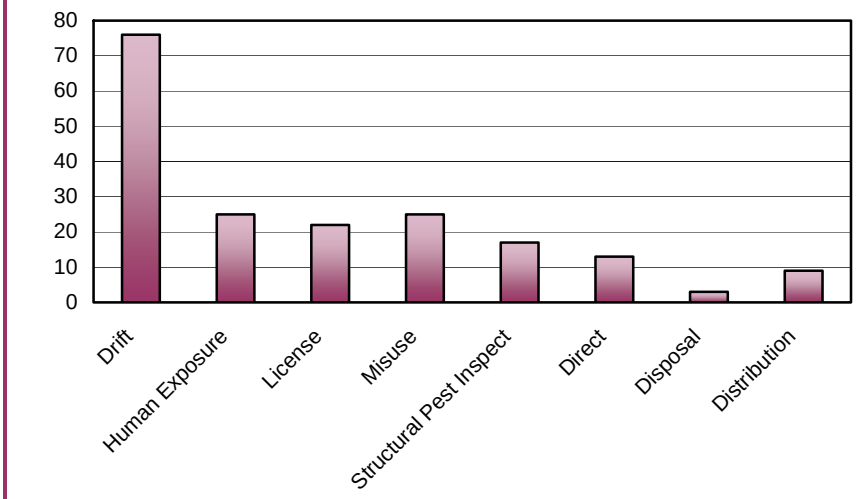
In 2005, WSDA responded within one day for 186 (96%) of the 193 complaints. 100 percent of the 25 human exposure complaints were investigated within 24 hours, as required by law.

Nature of Complaints

Complaints for 2005 were categorized according to the nature of the initial complaint received. The categorization of complaints for 2005 is shown in Figure 3. Investigation may find the complaint not valid, substantiate the initial complaint, or identify additional violations. For example, an initial complaint

concerns a possible drift. When the agency investigates, it may determine that drift did not occur, but may find that the applicator applied at the wrong rate or did not keep proper records. Although the applicator would not be cited for drift, he or she could be cited for being “faulty, careless, and negligent” or for record keeping violations. When complaints are associated with numerous possible violations, the most serious complaint is used to categorize the case. For example, a complaint involving human exposure caused by drift from application by an unlicensed applicator would be categorized as human exposure even if the only final outcome of the case was a Notice of Correction for record keeping. However, in general, the initial complaint is a fairly reliable indicator of the final outcome of the case and reflects the concerns of the complainant.

Figure 3. WSDA Nature of Initial Complaints by Number, 2005



In 2005, WSDA received 76 general complaints about drift and 22 complaints specifically about human exposure due to drift. There were 19 complaints about drift to property or vehicles and 24 crop-related drift complaints (Table 9). Pesticides moving off-target appears to be one of the major reasons why complaints were registered with WSDA. As in previous years, many of these complaints were not substantiated as the damage seen was due to drought, insects or frost, rather than pesticide drift. Non-agricultural complaints from actual applications generally concerned damage to ornamentals from commercial applications or from a neighbor’s application.

Non-licensed individuals and faulty structural inspections are two other areas where WSDA received numerous complaints (Table 9). In 2005, WSDA received 22 complaints about improper or no licensing, 15 complaints about direct misapplications, and 17 complaints specific SPI (in addition to complaints about improper SPI licenses or records). One bee kill was reported in 2005.

Table 9. Initial Complaints, WSDA Cases, 2005.

Complaints			
Animal death	1	Drift to pasture	1
Animal exposure - direct	1	Drift to property	10
Animal exposure - drift	1	Exam fraud	1
Bee kill	1	Failure to provide reports/records	3
Bird deaths - misuse	1	Faulty Structural Pest Inspection report	17
Direct - misuse	9	Human exposure - direct	3
Direct to crop	2	Human exposure - drift	22
Direct to plants	1	Human exposure - notification	1
Direct to property	1	Improper PPE	1
Disposal	3	Ineffective application	1
Distribution	9	License	22
Drift	2	Misuse	25
Drift to car	4	Notification	4
Drift to crop	24	Records	4
Drift to daycare	1	Spill of pesticide -treated grain	1
Drift to garden	1	Unsecured containers	1
Drift to house	3	Use inspection, WPS	1
Drift to ornamentals	10		

For 2005 cases, the initial complaint was compared to actions taken by the department to see if the violation was related to the complaint; that is, whether the complaint was valid. Action may not have been taken on the case even though the complaint was valid. For instance, if the violator could not be identified for a drift case, no action could be taken. Eighty-three (43%) of the 193 cases had the original complaint verified (i.e., the complaint was valid). Action was taken on an additional 30 cases, but these actions were unrelated to the original complaint. For example, the complaint may have been about misuse but, after investigation, the applicator was cited for failure to keep records.

Drift

There were 76 general complaints about drift; WSDA took action on 44 (58%) of these. Five cases had drift verified, but no action was taken (typically because the source could not be proven). There were 22 complaints about drift to humans with nine (41%) verified.

In 2005, the Association of American Pesticide Control Officials (AAPCO) conducted a national survey on drift for the years 1996-1998 and 2002-2004. The data were limited, as not all states participated in the survey and less information was available for 2004. However, it is of interest to compare Washington State percentages on drift to averaged national percentages. Data for 2005 indicate that Washington generally takes a slightly higher level of enforcement action (58%) versus the six-year national average (37%) (Table 10). Comparing 2005 national and Washington data shows that Washington has about the same percentage of agriculture drift complaints, but fewer of the Washington drift cases are from aerial applications.

Table 10. Comparison of Washington State to National Drift Survey

Enforcement Actions Taken	National Survey	Washington State
1996	808 (34%)	
1997	986 (42%)	
1998	742 (32%)	
2002	670 (40%)	
2003	589 (35%)	
2004	610 (36%)	
2005		76 (58%)
Drift Verified but No Enforcement		
2005	11%	7%
Target Application was Agriculture		
2005	70%	76%
Aerial Applications		
2005	34%	17%

Specific herbicides (phenoxys and glyphosate) associated with drift in Washington were similar to those seen nationally. However, the types of insecticides (spinosad, azinphos-methyl and carbaryl, instead of malathion) were different compared to national data.

Application Methods

In 2005, WSDA received 14 complaints about aerial applications, one chemigation complaint, one fumigation complaint, 92 complaints about ground applications, 68 complaints about items other than an application, and 17 complaints where the application method was undetermined or unknown.

Violations

Complaint investigations may result in a determination that a violation of state or federal laws or rules has occurred. During 2005, about 59 percent of WSDA complaint investigations resulted in some type of violation. Most violations were not severe in nature (see Table 14 on page 42) and most violators were issued a warning or correction notice rather than issued fines or license suspensions.

Type of Activity in Complaints with Violations

Complaints are classified by WSDA according to the following type of activities:

- Agricultural: Incidents occurring in an agricultural environment such as farming, forestry, greenhouses, or Christmas tree farming.
- Commercial/industrial: Incidents by licensed operators making applications to offices, restaurants, homes, and landscapes.
- Pest Control Operator (PCO): Incidents involving a subset of commercial/ industrial operators licensed to make applications to control structural pests.

- Structural Pest Inspections (SPI) A change in law established a separate definition for a license for this work. Replaces the previous Wood Destroying Organism incident count. No pesticide applications are made.
- Residential: Includes any application of a pesticide in a residential environment by the homeowner, resident, or neighbor.
- Right-of-ways: Applications made on public land such as roadways, electric lines, and irrigation canal banks.
- Other: The WSDA code for undefined use and includes licensing, storage, registration, records, and similar activities.

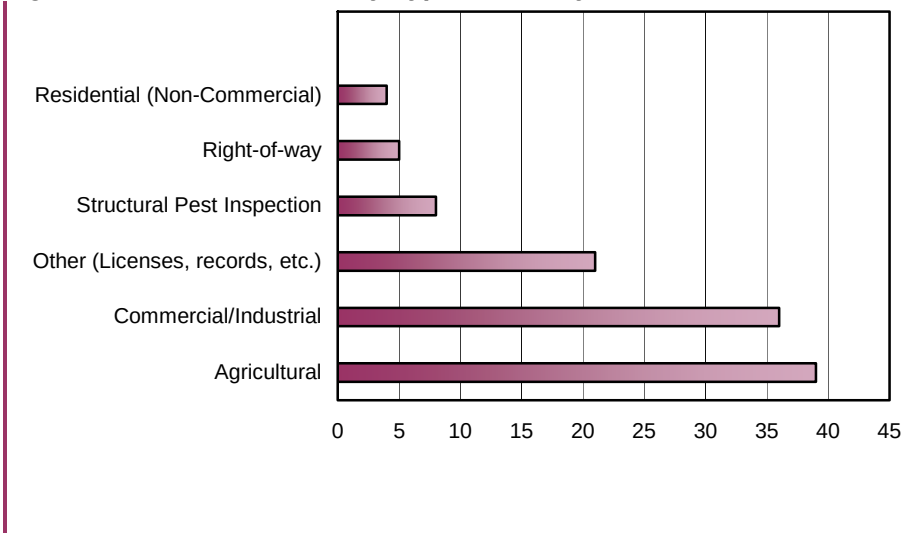
Table 11 shows complaints with violations by type of activity from 2001 through 2005.

Table 11. WSDA Violations by Type of Activity, 2001 – 2005

Activity	2001	2002	2003	2004	2005
Agricultural	63	69	39	42	39
Commercial/Industrial	27	31	38	17	36
Structural Pest Inspection	28	16	33	22	8
Residential (non commercial)	11	13	7	5	4
Right-of-Way	8	3	5	5	5
Other (licenses, records, etc.)	15	37	29	31	21
Total Violations	***152***	***169***	***151***	***122***	***113***

Figure 4 identifies the violations by type of activity for 2005.

Figure 4. WSDA Violations by Type of Activity, 2005



Violations alone do not give an accurate picture of pesticide exposures. For example, if drift occurs and the violator cannot be proven, no action can be taken. Sometimes the applicator has moved away, often out of state, and cannot be located. However, violations generally give a good representative picture of the validity and severity of pesticide incidents.

Type of License in Complaints with Violations

In 2005, WSDA licensed approximately 4,300 commercial applicators and operators and over 10,800 private applicators. WSDA also issued approximately 8,500 other individual license types for a total of nearly 24,000 licensees. Although WSDA licenses fewer commercial applicators than private applicators, commercial applicators make many more applications per licensee and more applications on land not owned by the applicator. This increases the probability of complaints for commercial applicators. Further information about WSDA license types is available in Appendix D.

In 2005, commercial applicators were involved in 50 complaints with 27 violations. Private applicators were involved in 30 complaints with 23 violations. Unlicensed applicators were involved in 43 complaints with 32 violations. Most of these applicators were unlicensed and conducting structural pest inspections that required a licensed inspector (Figure 5).

Figure 5. WSDA Type of Licensee Involved in Cases With and Without Violations, 2005

Agricultural Complaints

In agriculture, most complaints with violations involve pesticides applied to orchards. This is not unexpected, as orchards tend to be located in more populous areas and may be on smaller acreages intermixed with other crops, housing, and heavily traveled roads. For orchards, the most frequent complaints, as in previous years, involved applications to apples, followed by cherries and pears. The most frequent agricultural complaints in 2005 for a single crop were from applications to apples, most of these concerning possible drift or direct exposure to vehicles or property (Table 12).

The most common complaint about agricultural applications was from drift. The second most common complaint was from misuse of products.

Table 12 summarizes the most frequent target and complaint sites for investigations in which citations were issued for agricultural violations in 2005.

Table 12. WSDA Agricultural Violations, 2005

Most Frequent Target Site*		Most Frequent Complaint Site**	
Apples	8	Cars/property	13
Cherries	4	People	6
Pears	2	Wheat	3
Orchard	1	Apples	2
Potatoes	4	Grapes	2
		Potatoes	2

** Target site is the intended target for the pesticide.*
***.Complaint site is where the pesticide landed or the type of complaint filed.*

Non-Agricultural Complaints

In 2005, investigations due to licenses, recordkeeping or distribution were the most frequent non-agricultural complaints. Generally, complainants felt that the individual using pesticides was not properly licensed for the work being done. The most frequent type of violation cited by WSDA was failure to keep accurate or adequate records (for instance, did not record conditions conducive to rot or the presence of insects) and failure to obtain the proper license type for the application.

Complaints about drift from commercial lawn care applications were again significantly reduced from previous years.

Table 13 summarizes the most frequent target and complaint sites for investigations in which citations were issued for non-agricultural violations for 2005.

Table 13. WSDA Non-Agricultural Violations, 2005

Most Frequent Target Site*		Most Frequent Complaint Site**	
Lawn/ornamentals	4	License/Records/Sales	22
Right of way	4	Structural Pest Inspection	19
Weeds	4	Ornamentals/trees	14
		Animals	2
		People	2

** Target site is the intended target for the pesticide.*
*** Complaint site is where the pesticide landed or the type of complaint filed.*

Complaint distribution has been consistent over the years and points to the need for greater education of applicators, particularly for drift reduction techniques. Some violations may reflect the transient nature of employment or lack of applicator training and some, particularly for SPI's, may reflect willful fraud. Economic pressure to sell real estate may encourage inspectors to overlook possible wood-destroying organism conditions. The number of preventable violations points to the continuing need for a strong agency enforcement program. Given that the estimated number of applications is in the hundreds of thousands, the number of complaints directed to the department for serious offenses is relatively small.

Applicators must comply with all precautions and directions on the pesticide label. The following case illustrates problems that can occur when an applicator becomes careless by ignoring environmental conditions.

> *An application of atrazine and alachlor to corn drifted to an adjacent greenhouse and affected 15 workers. All complained of exposure and one went to the hospital for treatment of symptoms. The owner of the greenhouse had talked to the applicator about stopping the application because of wind direction. The applicator stopped briefly, and then resumed spraying. Residue was detected on a worker's clothing and around the greenhouse site. The applicator was fined $1800 for a faulty, careless and negligent application inconsistent and contrary to pesticide labels. Drift of the product was probably due to wind direction.*

Children and Farmworker Cases

In 2005, children were involved directly or indirectly in four cases.

- One case involved a ground application of insecticides applied to cherries that drifted onto a school bus with children on board. The driver complained of possible symptoms but the children did not. The bus and clothing of those affected had been washed before WSDA could investigate. DOH was also unable to investigate as there was no evidence remaining. WSDA issued a Notice of Correction based on testimony only.
- Another case involved an application of an insecticide to hops. The insecticide drifted onto a daycare property, but there was no evidence that children had been exposed. WSDA issued a Notice of Correction.
- One case involving one child was unsubstantiated. The individual reporting the incident thought that a neighbor's application affected her child's health, but there was no evidence of drift.
- The other case involving one child was a drift of insecticide from an airblast application to apples. The insecticide drifted on an adult and child in a car, who said they became nauseated and developed a rash. They saw a doctor but did not inform the doctor about the possible exposure. DOH classified the case as "probable." Residue was found in the car air filter (the car had been washed) and on site vegetation. WSDA issued a Notice of Intent.

Farmworkers were involved in three cases with a total of 18 individuals.

- One of these cases is described in the text box above *(An application of atrazine…).*
- Another case involved a drift of insecticides from a neighboring orchard onto two people thinning apples. The workers went to a health clinic with nausea and respiratory symptoms. WSDA issued a Notice of Intent.

- The third case was a follow-up investigation on numerous Worker Protection Standard violations. A Notice of Intent was issued.

Severity of Reported Complaints

The WSDA rates the severity of a case after complaint investigation is complete. Table 14 gives a detailed description of each rating. As in previous years, the majority of complaints were assigned a severity rating of two or less.

Table 14. Severity Rating of WSDA Complaint Cases, 2001 – 2005

Rating	2001	2002	2003	2004	2005	Criteria
0	23 10%	30 12%	22 10%	26 14.5%	29 15%	Problem not due to pesticides and/or no cause determined; Structural Pest Inspection with no violations.
1	71 31.5%	76 30%	51 23%	65 32.5%	77 40%	Pesticides involved, no residue, no symptoms occurred; possible pesticide problem, not substantiated; issues involving records, registration, posting, notification (multiple chemical sensitivity) or licensing; DOH classified "unlikely" or "insufficient information".
2	72 32%	114 45%	112 50%	83 41.5%	54 28%	Residue found, no health symptoms (human, animal); health symptoms not verified; multiple minor violations; off label use; worker protection violations; PPE violations with no health symptoms; plants with temporary or superficial damage only; Structural Pest Inspection faulty inspections; DOH classified "possible".
3	35 15.5%	31 12%	22 10%	18 9%	16 8%	Minor short-term health symptoms (rash, eye irritation, shortness of breath, dizzy, nausea, vomiting); bee kills of less than 25 hives; minor fish kills; economic plant damage under $1000; evidence of deliberate economic fraud; DOH classified "probable".
4	20 9%	3 1%	13 6%	8 4%	17 9%	Short-term veterinary or hospital care; bee kills of greater than 25 hives; significant fish kills; significant economic plant damage (over $1000); environmental damage; illness involving children; DOH classified "probable".
5	4 2%	1 0.4%	2 1%	0	0	Veterinary or hospital care overnight or longer; physician diagnosed children's illness as caused by pesticides; animal death due to pesticides; significant environmental damage; DOH classified "definite".
6	0	0	0	0	0	Human death due to pesticides.
Total	***225***	***255***	***222***	***200***	***193***	

In 2005, four of the 17 cases with a severity rating of “4” were herbicide drift to a susceptible crop, resulting in large financial losses. Three cases concerned drift to persons: two from insecticides and one from an herbicide tank mix. The remaining ten cases involved some type of pesticide misuse. Of these, four were deliberate (generally to remove obstructing vegetation), four had off-label use, and one was related to pesticide disposal. One case involved an insufficiently trained operator who was unable to shut off the end gun on a chemigation application.

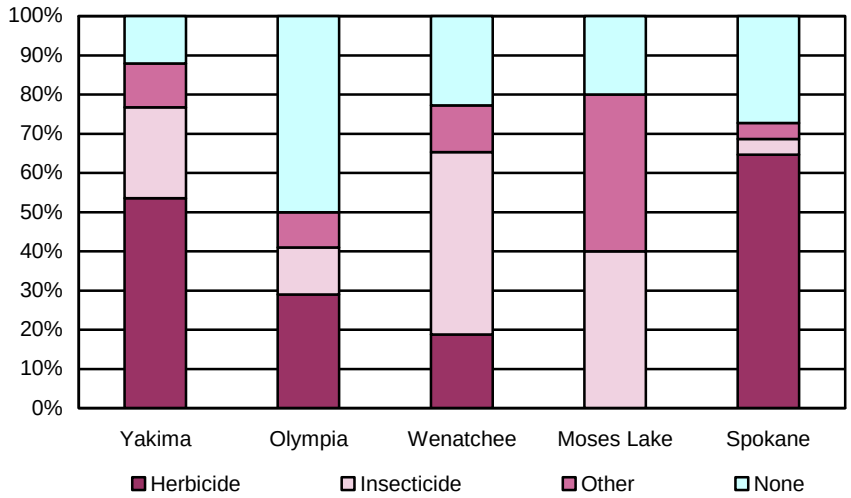
The following case is an example of an expensive mistake resulting from failure to verify the contents of an application tank.

> *A commercial landscape company had been hired to apply insecticides and fungicides to properties in the Spokane area. A new truck had been purchased by the company and had not yet been retrofitted with the specific couplings that would not allow herbicides to be loaded into insecticide/fungicide tanks. When the truck was reloaded, the technician saw that the coupler was the “herbicide” type and topped off the tank with a lawn herbicide and fertilizer. The driver was assigned this truck when his regular truck had a flat tire. Believing that the tank contained only insecticide/fungicide mix, he mistakenly treated 18 customers with the herbicide. The truck was assigned two days later to another driver whose regular truck had a pump leak. The tank was topped with the insecticide/fungicide mix and five more customers were treated. At this time the complaints started and the company realized they had a tank mix contamination. Twenty-three customers were affected and the company accepted full responsibility. To date, the company has spent over $16,000 on plant replacement, more costs are pending and one customer is still unsatisfied. WSDA issued a Notice of Intent.*

Type of Pesticide Involved

In 2005, herbicides were involved in 84 complaints and insecticides in 48 complaints. There were relatively fewer complaints about other pesticides such as fungicides (10), fumigants (1), and rodenticides (1). This may be because there are more obvious detrimental effects from herbicide and insecticide misuse and because herbicides and insecticides are generally applied at a higher frequency with more power equipment over larger areas. The type of active ingredient involved in complaints differs when the WSDA office locations are compared (Figure 6). Approximately 50 percent of the complaints to the Yakima and Spokane offices are from herbicide use, approximately 50 percent to the Wenatchee office are from insecticide use and approximately 50 percent to the Olympia office are from non-pesticide applications (generally house inspections).

Figure 6. Type of Pesticide Used in WSDA Complaints by Location, 2005



Overall, complaints about applications in 2005 continue to show a greater variety of pesticides than seen in previous years. There were four complaints about azinphos-methyl drift and no complaints about endosulfan drift. Complaints on both products continue to decrease. Compared to previous years, herbicide drift constitutes the greatest number of complaints. Applicators may be using more pest-specific products with a greater diversity of active ingredients and placing less reliance on broad-spectrum pest control products. This change could increase the number of single-product complaints, resulting in fewer, more general, complaints.

Two herbicides, glyphosate (20 complaints) and 2, 4-D (19 complaints), were the most frequently reported active ingredients in 2005 investigations (Table 15). This is consistent with previous years' numbers and probably reflects the frequency of use, use by unlicensed (untrained) applicators and the high visibility of misuse of these products. Many complaints involved tank mixes of several products or complaints about drift from an unspecified or unknown pesticide.

Table 15. Active Ingredients Most Commonly Involved in WSDA Complaints, 2005

Active Ingredient	
Glyphosate	20
2,4-D/Phenoxy	19
Miscellaneous/Unknown	15
Carbaryl	4
Diuron	4

Complaints reported to WSDA should be regarded as indicators of potential problem areas rather than a definitive summary of all misapplications. For example, drift involving products such as sulfur and kaolin (clay) may occur more often than reported. Such products are more identifiable. People may be less worried about unknown effects from these products. These products also have minimal health effects and minimal detrimental effects on non-target plants and property.

Enforcement Actions

Complaint investigations may result in the determination that a violation of state or federal laws or rules has occurred. Generally, first offenders or minor infractions are given a Notice of Correction and a period of time to come into compliance. For more serious infractions, WSDA follows the penalty matrix for any legal actions as specified in WAC 16-228-1130.

Sometimes more than one corrective action is taken on a case. In this report, only one corrective action per category is identified. For example, if more than one Notice of Correction was issued, the action would be listed as one Notice of Correction. However, if more than one type of corrective action was taken, such as a Notice of Correction and a Notice of Intent (which could happen if several applicators were involved in the same investigation), both types are listed.

The corrective actions taken in 2005 are listed in Table 16. (See Appendix D for definitions of the Enforcement Actions).

Table 16. WSDA Agency Actions, 2001 – 2005

	2001	2002	2003	2004	2005
No action indicated	74	84	71	76	77
Verbal warning	3	6	3	1	6
Advisory letter/warning letter	4	8	8	4	9
Notice of correction	111	127	116	98	76
Notice of intent/administrative action	37	31	26	20	23
Referred	2	2	0	2	2
Total actions	***231***	***258***	***224***	***201***	***193***

Other Agencies Involved

WSDA works in cooperation with other state and local agencies in the collection of evidence and testimony. Cooperating agencies may independently report their involvement in these cases or they may do no further independent investigation.

In 2005, WSDA consulted with other state, federal and local agencies, including local police, in 43 investigations. The agencies most frequently consulted were Department of Health (DOH) (21), Department of Ecology (Ecology) (6) and the Environmental Protection Agency (4). One case was referred to the Yakama Indian Nation.

WSDA Prevention Activities 2005

In addition to investigations of possible pesticide misuse, WSDA inspects marketplaces, importers, manufacturers, and other pesticide users for compliance with state and federal laws and regulations; registers pesticides for standard and state specific uses; licenses pesticide applicators; administers recertification courses; conducts training on the Agricultural Worker Protection Standard; administers a waste pesticide collection program; and, addresses groundwater issues that involve pesticides.

Compliance

- Conducted 12 marketplace inspections to check for cancelled, suspended, unregistered products, and child-resistant packaging.
- Conducted 67 agricultural use inspections to evaluate compliance with pesticide product labels, Worker Protection Standards, and equipment, licensing.
- Conducted 18 dealer inspections to verify dealer licensing and check for misbranded, cancelled, and restricted use sales of pesticide products.
- Conducted five inspections at establishments that produce pesticides to check for labeling, disposal, record reporting, and containment.
- Conducted numerous presentations at meetings held by growers, schools, labor groups, and other organizations to discuss pesticide compliance and preventing incidents.

Registration

- Initiated toxicological reviews of Special Local Needs, Section 18 Emergency Exemptions and Experimental Use permits on certain highly toxic or very highly toxic pesticides.
- Evaluated a number of spray adjuvants labeled for use on aquatic sites. Evaluations resulted in a request to Ecology to remove one adjuvant (R-11) from the aquatic and nuisance weed NPDES permit and to add nine new adjuvants (Bond, Cygnet Plus, Exciter, Intensify, Interlock, Liberate, Magnify, Sinker and Tactic). The added adjuvants are less toxic to aquatic organisms.
- Developed and mailed the annual pesticide newsletter, *"Pesticide Notes,"* to all licensed applicators. The newsletter focused heavily on worker safety issues and current pesticide problems.
- Continued providing all day hands-on training in Spanish to pesticide handlers and a WPS Train the Trainer program to farm supervisors. Involved in preparing the agenda for the First Annual Governor's Agricultural Safety Day and provided moderators and speakers. Increased the number of Spanish recertification meetings and provided up-to-date pesticide safety information.

- Continued outreach to Spanish speaking farmworkers on pesticide safety through radio programs, newsletters, training classes and presentations.
- Initiated a project with the University of Washington's Pacific Northwest Agricultural Safety and Health Center to determine the effectiveness of using fluorescent tracer and black lights as training tools to reduce pesticide exposures.
- Developed Spanish language training manuals and applicator exams.

Waste Pesticide Disposal

- Collected and disposed of 136,367 pounds of unusable agricultural pesticides from 393 customers. This is an average of 347 pounds per customer. Since 1988, over 895 tons of pesticides have been collected and properly disposed of through this program.
- Identified contents of unknown containers suspected to be pesticides and disposed of them or recommended other disposal options.
- Worked on issues around pesticide container recycling.

Groundwater Protection

- Developed a model for pesticide aquifer vulnerability maps for Washington State.
- Participated in educational meetings on protecting groundwater from pesticides.
- Revised a mapping project for use of groundwater depth in a statewide aquifer vulnerability assessment.
- Completed development and loading of comprehensive pesticide/ groundwater database for all United States Geological Survey, Ecology, DOH and WSDA groundwater data from 1985 to present. This allows for accurate analysis of pesticide impacts to Washington groundwater over the past 20 years.

Ecology

Washington State Department of Ecology's summary of pesticide-related complaints from Spill Prevention and Toxics Cleanup programs, and aquatic pesticide permitting during 2005.

Background

Multiple programs within the Department of Ecology (Ecology) are involved in pesticide-related activities. Ecology works with the National Marine Fisheries Service and other federal and state agencies to reduce the impacts of pesticide applications to salmonids under the Federal Endangered Species Act. The agency participates in an interagency Urban Pesticide committee, the Washington State Healthy Schools Initiative, and other projects. Ecology is responsible for oversight of contaminated areas requiring cleanup or monitoring, including areas contaminated with pesticides. Ecology's pollution prevention and sustainability efforts emphasize prevention of overuse and misuse of pesticides.

This report presents data for three programs: Spill Prevention, Preparedness, and Response Program; Toxics Cleanup Program; and Water Quality Program. These programs track data on pesticide spills, on the cleanup of pesticide contamination, and on the use of pesticides to protect water quality. This report also provides a brief description of findings from the first three years of an ongoing cooperative study by Departments of Ecology and Agriculture, which investigates pesticide occurrence in salmonid-bearing streams.

Spill Prevention, Preparedness, and Response Program: Pesticide-Related Incidents

Ecology's Spill Program responds to pesticide-related complaints and is responsible for ensuring that damage from a spill is contained and cleaned up as quickly as possible. Ecology uses data from pesticide-related spills and complaints to identify where additional education is necessary to reduce impacts of pesticides on human health and the environment. Summaries of the Spill Program's pesticide-related complaints for 2005 are provided in Appendix C.

Table 17 lists the types of pesticide-related complaints received from 2001 through 2005. Complaints can involve more than one category of concern.

Table 17. Ecology Pesticide-Related Complaints, 2001 – 2005

Type of complaint*	2001	2002	2003	2004	2005
Pesticides threatening ground or surface water	11	23	13	10	23
Pesticide disposal or waste concern	14	12	12	6	2
Spills and fires	1	12	5	10	12
Unsafe pesticide storage or handling	6	11	10	3	5

** Complaints may involve more than one category.*

There were 39 pesticide-related complaints involving threats to air, water, and/or soil in 2005. These are listed in Appendix C. Spill Program response to complaints may include follow-up by phone, referral back to involved parties for voluntary cleanup, referral to another agency, or issuance of a notice or requirement for cleanup. When a complaint is resolved during initial contact and does not require technical assistance, investigation, or referral, it is classified as "No follow-up." A request for information is an example of a "No follow-up" complaint. Investigations are initiated for complaints requiring field work, research, coordination with other agencies, or technical assistance.

In 2005,

- Five complaints were listed as "No follow-up"
- Sixteen complaints were investigated
- Nine complaints were referred to other agencies
- Four complaints had both investigations and referrals

Ecology responded within 24 hours for 27 (69%) of the 39 complaints in 2005. Only five complaints had a greater than 24-hour turnaround time. The agency does not have a legislative mandate for response time. Ecology investigated 19 of the 39 complaints.

Of the 39 pesticide-related complaints received by Ecology during 2005:

- Five occurred in the agricultural environment
- Fourteen involved commercial or industrial activities
- Seven were reported by private citizens
- Six were transportation-related (car, truck, boat)
- Seven resulted from residential activities
- Two resulted in potential exposure to humans
- Seven required some form of cleanup or removal of materials
- Four were referred to the Toxics Cleanup Program

After the Ecology Spill Program responds and stabilizes the initial emergency, staff close the case if long-term impacts are unlikely. If long-term impacts are anticipated, the case is referred to another program within the agency. When indicated, Ecology refers complaints to other state or local agencies. In 2005, the Spill Program referred seven complaints involving pesticides to WSDA or Department of Transportation (one referral did not name recipient). Ecology immediately notified DOH of two incidents where humans were potentially exposed to pesticides.

The following two incidents are examples of pesticide-related complaints referred to the Spill Program.

> *In July 2005, Ecology provided technical assistance when an incident occurred in Willapa Bay National Wildlife Refuge. An airboat carrying six people, 50 gallons of aquatic herbicide and 70 gallons of gasoline capsized and sank. There was no detected spill of the herbicide or gasoline. As the herbicide was intended for control of spartina in the bay, the release was not considered potentially hazardous. When divers recovered the boat, most of the gasoline was still in the tank.*
>
> *In April 2005, the Yakima volunteer fire crew responded to a storage shed fire burning in an orchard. Contents of the shed were unknown. The fire chief determined that the fire would be difficult to extinguish, pulled the firefighters away from the smoke and instructed them to allow the fire to burn. Putting water on such a fire would have been very dangerous for very little gain. When the shed had burned down to the three walls of mason bricks, firefighters applied high expansion foam, greatly reducing the amount of smoke produced. Ecology investigators notified Yakima County Health District of potential smoke impacts on neighbors. The site was referred to Ecology's Toxics Cleanup Program for potential soil remediation.*

Toxics Cleanup Program: Contaminated Sites Containing Pesticides

Ecology's Toxics Cleanup Program is responsible for oversight of contaminated areas requiring cleanup or monitoring. These sites may have been contaminated from leaking underground petroleum tanks, historic or current pesticide use, spills, or industrial processes. When a contaminated site is listed on the program's Confirmed and Suspected Contaminated Sites Report list, it stays on the list until it is cleaned up or requires no further action. A site may remain on the list for more than one year until either of these actions occurs.

Ecology added 11 pesticide-contaminated sites to the Confirmed and Suspected Contaminated Sites Report in 2005 (Appendix E). Five of these were in Yakima County, and one each in Benton, Chelan, Clark, Cowlitz, King, and Skagit counties. Ecology designated four sites as active and undergoing cleanup, six as awaiting cleanup, and one as a non-active/remediated site that was cleaned up or required no further action.

A total of 195 pesticide-contaminated sites were on the Confirmed and Suspected Contaminated Sites Report in 2005. Ninety-five sites remain active in the cleanup process at year's end. These are listed in Appendix E. The status for all sites for 2005 is summarized in Table 18.

Table 18. Status of Sites Listed on Confirmed and Contaminated Sites Report, 2005

Pesticide-contaminated sites	2005
Sites undergoing cleanup at year's end	95
Sites with no further action needed	65
Sites awaiting further investigation	35
Cumulative pesticide-contaminated sites for the year	195

Water Quality Program: Aquatic Pesticide Permit

Ecology is delegated by the Environmental Protection Agency (EPA) to implement all federal water pollution control laws and regulations through the state's laws. Implementation of laws and regulations includes issuance of National Pollutant Discharge Elimination System (NPDES) permits for use of aquatic pesticides to protect water quality. The permitting process ensures that chemicals are sparingly and properly applied, thereby reducing the potential for exposure to natural resources and people. Aquatic pesticide use during the 2005 application season is reported in the following sections. This is the second year aquatic pesticide permit data were tabulated and analyzed for this purpose.

Nuisance Plant and Algae Control (NPDES) Permit

The Nuisance Plant and Algae Control General NPDES Permit is issued to homeowners and lake advocacy groups for products used to control algae blooms and/or native nuisance weeds in lakes and ponds. Products permitted include: diquat, endothall, 2,4-D (BEE), 2,4-D (DMA), fluridone, triclopyr, imazapyr and glyphosate. This permit covered approximately 50 lake projects in 2005. Due to a settlement decision between the Washington Toxics Coalition and the WSDA, this permit was reissued in 2006 and now covers all in-lake activities (noxious weeds, which were previously covered by WSDA, nuisance plants, and algae). The new permit requires reporting, which will be included in next year's PIRT report.

Oyster Grower's NPDES Permit

The Oyster Grower's NPDES Permit is an individual permit issued directly to the Willapa Bay/Grays Harbor Oyster Growers Association by Ecology's Southwest Regional Office. It allows the use of carbaryl, an insecticide in the carbamate family, to control burrowing shrimp in oyster beds. This permit was reissued in 2006 and expires June 30, 2011. In 2005, 576 acres were treated with 4,536 pounds of carbaryl.

Noxious Weed NPDES Permit

The Noxious Weed General NPDES Permit is issued to government agencies, homeowners, lake-advocacy groups, and marinas to treat lakes, rivers, and estuarine environments for noxious, non-native plant species. Treated areas are located throughout Washington. Permits are issued by WSDA in partnership with Ecology. Product totals are listed in Table 19.

Table 19. Total Product Applied Under Noxious Weed NPDES Permit, 2005

Product	Gallons	Pounds
2, 4-D	78	1,335
Diquat	54	N/A
Fluridone	3	3,656
Glyphosate	1,113	N/A
Imazapyr	4,756	N/A
Triclopyr	72	N/A
Total product applied	***6,076***	***4,991***

Fish Management NPDES Permit

The Fish Management NPDES Permit is issued to the Washington State Department of Fish and Wildlife (WDFW) for fish management in Washington lakes. Currently, WDFW is allowed to use only the product rotenone for fish management. The five lakes in Table 20 were reported as treated during the spring and fall of 2005.

Table 20. Total Product Applied Under Fish Management NPDES Permit, 2005

Water Body	Gallons	Pounds
Burke Lake	15	4,455
Big Green Lake	10	1,815
Quincy Lake	15	2,530
Rat Lake (Mouse Pond)	31	16,775
Spectacle Lake	38	46,255
Total product (Rotenone) applied	***109***	***71,830***

Irrigation District NPDES Permit

The Irrigation District NPDES Permit is issued for products to control weeds and algae in irrigation systems. The permit was issued to 16 of 97 Washington irrigation districts during the 2005 application season. The 16 districts include 81 percent of the total irrigated land in Washington. The product totals are listed in Table 21.

Table 21. Total Product Applied Under Irrigation District NPDES Permit, 2005

Product	Gallons	Pounds
Acrolein	26,508.	N/A
Chelated copper*	2,175	N/A
Copper sulfate*	N/A	160,327
Green Clean	N/A	450
Xylene	7,215	N/A
Total product applied	***35,898***	***160,777***

** When chelated copper and copper sulfate are converted into elemental copper, the amount of copper applied equals 41,077 pounds.*

Mosquito General NPDES Permit

The number of groups treating for mosquitoes in Washington State rapidly increased in 2005 to prepare for the arrival of West Nile virus. Ecology allows mosquito control districts and government agencies to apply for coverage under a general permit through DOH. Some groups apply for coverage directly through Ecology's regional offices. All groups are required to submit the previous year's pesticide use data by February 1 of the following year. Table 22 summarizes pesticide totals statewide from the 2005 application season.

Table 22. Mosquito General NPDES Permit, 2005

Product type	Gallons	Pounds
Bacillus spaericus (H-5a5b)	N/A	4,817
Bacillus thuringiensis israelensis (Bti) granular/briquettes	N/A	19,001
Bacillus thuringiensis israelensis (Bti) liquid	8,584	N/A
Methoprene briquettes	N/A	2,005
Methoprene granular	N/A	154
Methoprene liquid	494	N/A
Methoprene pellets	N/A	377
Monomolecular film	73	N/A
Paraffinic white mineral oil	199	N/A
Total product applied	***9,350***	***26,354***

Surface Water Monitoring

The Departments of Ecology and Agriculture have a cooperative agreement for an ongoing study investigating pesticide occurrence in salmonid-bearing streams. Results of the first three years of the study, *Surface Water Monitoring Program for Pesticides in Salmonid-Bearing Streams 2003-2005,* are available online at http//:www.ecy.wa.gov/biblio/0603036.html.

Pesticide concentrations were measured in an urban drainage represented by Thornton Creek in the Cedar-Sammamish watershed, and in agricultural drainages represented by Marion Drain, Sulphur Creek Wasteway, and Spring Creek in the Lower Yakima watershed.

Temporal trends and potential impacts to aquatic species are investigated through comparison to: (1) EPA registration toxicological criteria for fish, aquatic invertebrates, and plants; (2) Washington State Water Quality Standards; and (3) EPA National Recommended Water Quality Criteria.

A total of 51 pesticides and degradate compounds were detected in the urban and agricultural drainages. Ten of these (4,4-DDE, 4,4-DDT, azinphos methyl, carbaryl, chlorpyrifos, diazinon, disulfoton, endosulfan sulfate, malathion, and oxyfluorfen) were above assessment criteria. Ninety-six percent of detections were below assessment criteria. In regards to the data collected from 2003-2005, the environmental effect of the residues detected have the potential to cause harm to invertebrate populations. Other than one malathion detection, none of the exceedances show direct effects to fish. WSDA is working with farmers to identify areas in their farming practices that may be contributing to these exceedances.

Restriction or cancellation of chlorpyrifos and diazinon use during 2000-2004 resulted in reduced detection frequency and magnitude of these compounds in Thornton Creek.

Chlorpyrifos, malathion, and azinphos methyl were detected in all three agricultural drainages. Chlorpyrifos residues were detected in the spring in all agricultural drainages and in the fall in Marion Drain. Azinphos methyl and malathion detections occur when summer maximum temperatures may restrict Mid-Columbia summer steelhead (Endangered Species Act listed) occupation of monitored stream reaches. If summer steelhead are present, elevated water temperatures may make them more susceptible to pesticide toxicity.

Health

Washington State Department of Health's summary of pesticide-related investigations during 2005.

Background

The Department of Health (DOH) Pesticide Program investigates reports of illness related to pesticide exposure. Data collected from the investigations are used to identify public health problems and develop strategies for prevention.

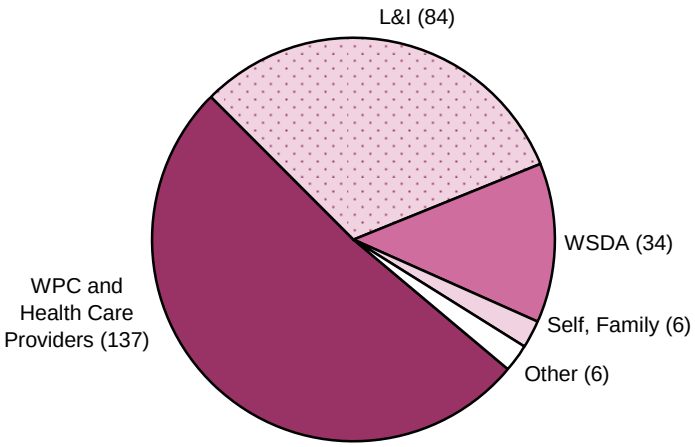
This DOH report on 2005 pesticide-related data describes sources of case reports, classification and severity of investigated cases, and the number and location of DOH investigations. Data on occupational cases, agricultural cases, and non-agricultural cases are presented. The section concludes with a description of DOH pesticide illness prevention activities.

Sources of Case Reports

DOH receives reports of suspected pesticide illness from numerous sources, including Washington Poison Center (WPC), Department of Labor and Industry (L&I) Claims Administration Program, Washington State Department of Agriculture (WSDA), health care providers, and others (Figure 7). More than one agency may report the same illness event (incident). See Combined Agency Data on page 16 for a description of reporting requirements and patterns of referral between agencies.

Figure 7. Source of Case Reports,* 2005

n = 252 cases investigated



*Some cases were reported by more than one agency.

DOH reviews reports of suspected pesticide illness incidents and conducts preliminary interviews to determine if the incidents should be investigated. An incident is investigated if all of the following conditions apply:

- a pesticide exposure is reported
- symptoms are reported
- the individual saw a health care provider
- the pesticide exposure occurred during the last three months
- the pesticide exposure occurred in Washington State
- the pesticide exposure was not intentional (e.g., suicide gesture)

An incident may involve multiple cases (persons) who experience pesticide illness. The incidents investigated by DOH and found to be definitely, probably or possibly related to the pesticide exposure are briefly described by case number in Appendix C.

Increased Investigation of WPC cases – December 2004 through February 2005

Prior to the implementation of electronic reporting, WPC reporting criteria included symptomatic illness where the person had seen a health care provider or WPC had referred the person to a health care provider. DOH was interested in capturing and evaluating calls in which a health care provider was not initially involved. Electronic reporting provided an opportunity to expand reporting criteria to include these cases. From December 2004 through March 2005, DOH investigated symptomatic cases with no health care provider involvement. This contributed to increased numbers of cases opened for investigation during these months. Due to limited resources, DOH discontinued investigating cases in which health care providers were not involved beginning April 1, 2005. Details from the additional cases are described on page 60 in this report.

Classification of Investigated Cases

DOH Pesticide Program investigators interview individuals, obtain pesticide application records and medical records and, on occasion, conduct field visits. Data from investigations are used to classify the likelihood that symptoms reported are related to a pesticide exposure. Case classification is determined through documentation of the exposure, documentation of health effects, and evaluation of the causal relationship. DOH uses the NIOSH Case Classification System to distinguish between Definite, Probable, Possible, Suspicious, Insufficient Information, and Unlikely cases. Case classification criteria are listed in Appendix B. Minimal criteria for assignment to Definite, Probable, and Possible classifications are that reported symptoms are characteristic of known toxicological effects of the pesticide agent, and the temporal relationship between the exposure and symptoms is plausible. Further description of Definite, Probable, and Possible (DPP) cases is provided in Table 23.

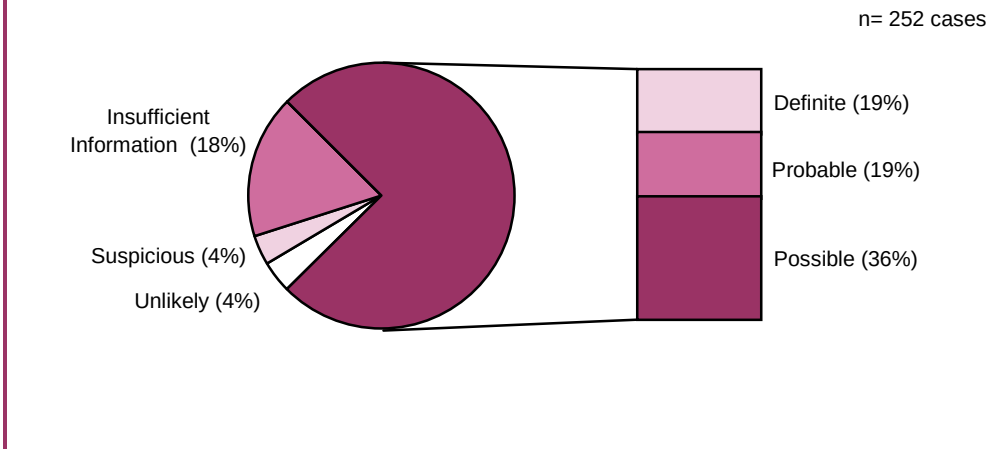
Table 23. Classification Criteria of Definite, Probable, and Possible

	Evidence of Exposure	Evidence of Health Effects
Definite	Laboratory, clinical, or environmental evidence corroborates exposure, and →	Two or more post-exposure health effects (one a sign*) or lab findings are reported by a licensed health care provider.
Probable	Laboratory, clinical, or environmental evidence corroborates exposure, and →	Two or more post-exposure symptoms** are reported.
	Evidence of exposure is based on report from case, witness, application, observation of residue or contamination, and →	Two or more post-exposure health effects (one a sign) or lab findings are reported by a licensed health care provider.
Possible	Evidence of exposure is based on report from case, witness, application, observation of residue or contamination, and →	Two or more post-exposure symptoms** are reported.

**Signs are objective evidence of illness and are observable on examination (e.g,. low heart rate, cough, rash, depressed cholinesterase activity).*
***Symptoms are subjective evidence of illness and are often not observable on examination (e.g,. headache, nausea, dizziness).*

In 2005, 188 (75%) of the 252 reported cases were determined to be definitely, probably, or possibly related to pesticide exposure. These DPP cases are listed in Appendix C. This number does not include the WPC investigations. Figure 8 illustrates the classification of cases for 2005.

Figure 8. Classification of Cases, 2005



The number of DPP cases for the years 2001 through 2005 is listed in Table 24.

Table 24. Definite, Probable, and Possible Case (DPP) Classification, 2001 – 2005

Classification	2001	2002	2003	2004	2005
Definite	21	50	69	63	49
Probable	51	60	53	55	48
Possible	48	64	62	86	91
Total DPP	*120*	*174*	*184*	*204*	*188*
Percent DPP	48%*	64%	67%	76%	75%
All Cases Reported	***250***	***270***	***275***	***269***	***252***

** In 2002, DOH changed how cases are tracked. See narrative.*

Although the percentage of cases classified as DPP appears to have increased since year 2001, this is mostly an artifact of a change in how DOH tracks cases. Prior to 2002, cases that were investigated and found to be asymptomatic or unrelated were entered into the database and tracked. Beginning in 2002, these cases are no longer entered or tracked.

In 2005, 44 investigated cases were classified as insufficient information. Common reasons that cases are classified as insufficient information are 1) only one symptom was reported, or 2) DOH was unable to determine the type of pesticide involved, or 3) DOH could not sufficiently characterize the details of exposure (e.g., couldn't reach patient for interview) or 4) medical records and/or spray records were inconsistent with the patient's report of illness. None of these four conditions result in automatic insufficient information classification. The percentage of investigations classified as insufficient information has remained steady for the last four years.

Nine cases were classified as suspicious, ten were classified as unlikely, and one was considered unrelated to pesticide exposure.

These are examples of cases that DOH classified as suspicious, unlikely, or insufficient information to be related to pesticide exposure.

> ***Suspicious**: A 60-year-old male spilled an undetermined amount of triazine herbicide in his garage. The next day he reported health effects wondering if the symptoms were related. He went to the local hospital for medical attention, though he reported he was feeling better at the time.*
>
> ***Unlikely**: A family-operated food store had a problem with flies, so a family member hung four pest strips from the 15-foot ceiling. The number of strips did not exceed the product label criteria for cubic feet placement. A 41-year-old male clerk said that within three weeks of the strips being hung, he developed numbness in his left hand and left toe. By the fourth week, the strips were removed and he felt better. He had no physical contact with the product. He sought medical attention. DOH classified the case as unlikely to be related to the pesticide exposure. The person's reported illness would not be expected from exposure to this product.*
>
> ***Insufficient information**: An application of roach gel bait was made by injecting the compound into an electrical recepticle. Two days later, the 23-year-old female tenant developed a rash on her fingers she thought may be related. At no time did she come in contact with the gel. She also mentioned working at a child care business and "having her hands in everything." She called 911, took medication for itching, and symptoms quickly resolved.*

Severity of Medical Outcome

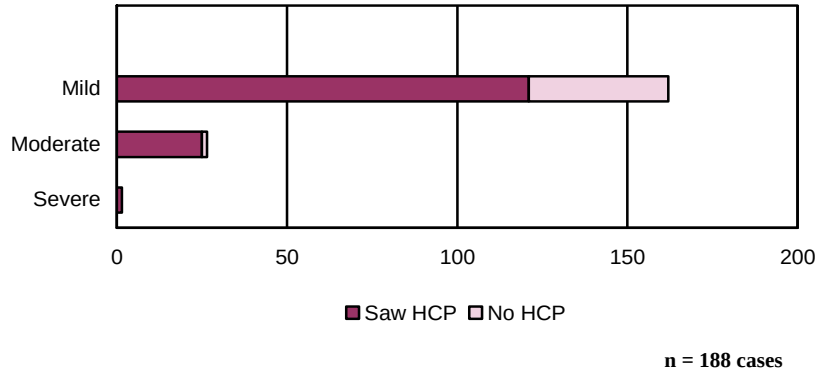
DOH uses the NIOSH Severity matrix for classifying signs and symptoms associated with pesticide cases (Appendix B). The low/mild category includes transient and spontaneously resolving symptoms such as nausea, vomiting, shortness of breath, headache, dizziness, and skin or eye irritation. With low/minor severity cases, there is minimal time loss (three days or less) from work or normal activities. Even relatively pronounced symptoms such as profuse sweating, ataxia, peripheral neuropathy, eye pain, and difficulty breathing are classified as low/mild if a health care provider did not directly observe the symptoms.

Moderate illness or injury includes signs and symptoms which are pronounced and/or prolonged and in most cases must be observed by a health care provider. These include second and third degree skin burns, ocular burns, systemic symptoms such as altered heart rate and slurred speech, and asthma attack. For moderate cases, the time loss from work or normal activities is three to five days.

Cases are classified as severe when the illness or injury is considered life threatening; these cases typically require treatment or hospitalization to prevent death. Signs and symptoms include, but are not limited to, coma, cardiac arrest, renal failure and/or respiratory depression. The individual sustains substantial loss of time (more than five days) from regular work.

In 2005, 161 (86%) of the 188 definite, probable, or possible DOH cases were classified as mild. Twenty-six (14%) cases were classified as moderate and one (0.5%) case was classified as severe (Figure 9). Of the 188 DPP cases in 2005, 146 (78%) received medical care for their symptoms.

Figure 9. Severity of Medical Outcome, DPP Cases, 2005



DOH classified the severity of the first case below as moderate and the second case as severe. Both had direct contact with the pesticide products.

Moderate case: A 41-year-old homeowner dissolved a dry granular form of moss killer and applied it for one hour to his roof and siding. He did not wear gloves and the product dripped onto his left hand. He washed his hands and felt a burning sensation on his left hand. He was seen at the ER twice and treated for first and second degree burns. He said that he would wear gloves next time. DOH encouraged use of goggles as well. DOH classified this case as definitely related to the pesticide exposure.

Severe case: A 49-year-old male vegetation management supervisor/city employee was taking inventory in a chemical storage room and decided to relocate some 2.5 gallon containers improperly stored on the top shelf. When he reached up to move a container of herbicide, the lid was missing and the product spilled into his face. He swallowed some of the product. He immediately took a full body shower and was taken for medical care. He was hospitalized the next day due to progressive respiratory and gastrointestinal symptoms. He was discharged after 10 days. DOH provided resources to the health care providers and L&I conducted an inspection. DOH classified this case as definitely related to pesticide exposure.

Enhanced Surveillance Pilot: January – March 2005

Investigations of Cases with No Health Care Provider

In December 2004, the Washington Poison Center (WPC) began electronic screening and referral of suspected pesticide cases to DOH Pesticide Program. Prior to this time, DOH was only referred symptomatic pesticide exposures if the ill person saw a health care provider. During the first three months of 2005 the investigations were expanded to include 55 extra cases in which a person reported a symptomatic pesticide exposure but did not seek health care.

Findings

Forty-four of the 55 cases were determined to be possibly related to pesticide exposure from the information reported. There was however, little objective evidence to confirm either the exposure or the health effect. Three were cases confirmed to the level of Probable or Definite.

Forty-four of the 47 DPP exposures were residential. Thirty-six (77%) were exposures to adults and eleven (23%) were exposures to children. All the symptoms reported were mild in medical outcome. Five cases involved applications by commercial applicators, the rest were applied by the general public. Only two cases were occupational exposures. One was a landscaper applying a pesticide. The other was a social worker exposed when visiting a client that over-applied mothballs in her house.

Outdoor and indoor applications of pesticides were equally problematic. Each was associated with 20 cases. The target of the pesticide was typical for the time of year: fleas, ants and rodents in indoor environments; weeds, moss, and slugs in outdoor environments. Monitoring the target pest in this wider set of cases enables DOH to focus on specific pests in urban pesticide use safety educational activities.

Decisions

DOH did not have the resources to continue full investigations of minor symptomatic cases which were managed at home. DOH continues to screen symptomatic reports of pesticide exposures to identify people who have significant exposures or significant symptoms but do not seek health care. Significant cases are investigated.

DOH will track and report on the numbers and general nature of more minor exposures.

Outcome

DOH developed a data system to sort and summarize these cases. Starting in 2007, DOH will begin tracking and describing this data as part of our pesticide illness surveillance program. DOH will explore ways to include some of these cases in focused investigations of priority problems, such as exposures to children and problems with insect foggers.

Number and Location of Investigated Cases

Number of Incidents

During 2005, the Pesticide Program investigated reports of 220 incidents involving 252 cases of possible pesticide illness (Figure 10). In addition, DOH investigated 55 cases as part of a pilot on expanded surveillance. These 55 cases are not included in Figure 10 but are described on the previous page.

Figure 10. DOH Reported Incidents and Cases, 2001 – 2005

Number of Persons Involved in DPP Cases

In 2005, there were 160 incidents involving 188 definite, probable, or possible cases. Of the 160 incidents, 147 (92%) involved one individual. Of the incidents involving more than one person, eight involved two persons, three involved three persons, one involved four persons and one incident involved 12 symptomatic persons. The incident involving 12 cases is described below.

> *Fifteen female and male employees, ages 20 - 72 were exposed to herbicide (alachlor and atrazine) drift while working in and around greenhouses on the campus of a private school. Their supervisor reported that it was quite windy and the drift came from a ground application to an adjacent corn field. The spray drifted into the greenhouses. The employees could smell the chemicals: 12 had symptoms, one was taken to the hospital for care, and three were asymptomatic. WSDA samples from the area and from one worker's clothes were positive for the herbicide.*

Location

In 2005, 25 of the 39 counties in Washington had cases that were classified as definitely, probably, or possibly related to pesticide exposure. Table 25 lists the 11 counties with the most reported cases. Of the 188 DPP cases, 153 (81%) came from these counties while 77 percent (4.5 million) of the state population resides in these 11 counties.

Table 25. Top 11 Counties with the Most Reported Cases*, 2005

County	Incidents	Cases
King	25	25
Grant	18	25
Yakima	16	17
Pierce	15	17
Spokane	13	14
Snohomish	9	9
Franklin	8	20
Benton	7	7
Thurston	6	6
Douglas	5	7
Clark	5	6

** Limited to cases with illness classified by DOH as definitely, probably or possibly due to pesticide exposure.*

More of the 188 DPP cases occurred in eastern Washington (106) than in western Washington (80). The county was unknown for two cases. The distribution of cases may reflect population density and location of labor-intensive crops.

Figure 11 illustrates the location of definite, probable, or possible cases for 2005.

Figure 11. Distribution of Cases by County, 2005

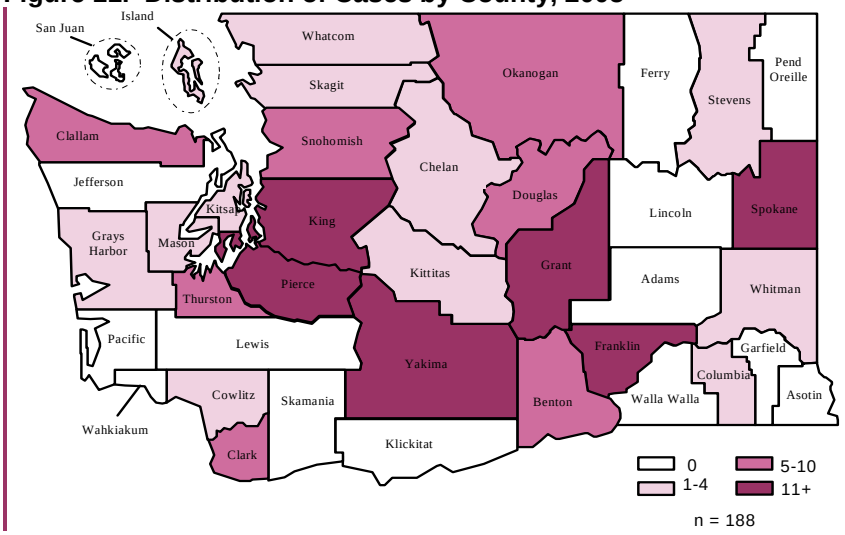


Table 26 displays the distribution of cases defined as definite, probable, or possible by agricultural and non-agricultural setting from 2001 through 2005.

Table 26. Annual Agricultural and Non-Agricultural Cases*, 2001 – 2005

Year	Agricultural	Non-Agricultural	Total Cases
2001	58 (48%)	62 (52%)	120
2002	75 (43%)	99 (57%)	174
2003	73 (40%)	111 (60%)	184
2004	64 (31%)	140 (69%)	204
2005	77 (41%)	111 (59%)	188

** Limited to cases with illness classified by DOH as definitely, probably, or possibly due to pesticide exposure.*

While the number of agricultural cases reported in the last five years has remained fairly steady, the number of non-agricultural cases has increased since 2000. The increase is partly due to improvements in reporting from the WPC. Agricultural exposures occur when the pesticide application is intended for agricultural commodities such as fruit and field crops, nursery, livestock, and forest operations. Typical non-agricultural exposures include a spill or splash while opening and pouring pesticides, or wind blowing spray during the application. Two types of exposures seem particularly problematic around the home: 1) eye exposures while spraying moss-out products overhead onto roofs and 2) skin and inhalation exposures to bee and wasp spray while spraying bee nests. Additional prevention education is needed to encourage care and protective clothing for these applications.

Seasonality of Agricultural and Non-Agricultural Incidents

In 2005, the majority (68%) of investigated agricultural-related cases occurred in the three months from April through June, 2005. This differs from 2004 where about the same percentage (67%) of agricultural events occurred in the six months from April to September. This may be due to a shift in pesticide use patterns in orchards. Late season azinphos-methyl applications are being supplanted by use of spinosad and acetamiprid products, which have much lower acute toxicity. According to USDA National Agricultural Statistics Service for 2005, the total amount of azinphos-methyl applied to apples in Washington dropped over 30 percent from 2003. The drop was due to a slight decrease in the percent acreage of apples treated and to a 20 percent drop in the number of applications/year to the same acreage. Acetamiprid was applied to 41 percent of apple acreage in 2005. This was a 64 percent increase over 2003. Spinosad was applied to 62 percent of apple acreage. This was a 55 percent increase from 2003.

Non-agricultural incidents correspond to periods when people are most likely to control landscape weeds and insects, garden pests, and home insects pests. Table 27 shows 2005 agricultural and non-agricultural cases by season.

Table 27. Cases by Season of the Year*, 2005

	Agricultural	Non-Agricultural	Total Cases
January - March	7	23	30
April - June	52	41	93
July - September	16	40	56
October - December	1	7	8
Total	***76****	***111***	***187****

** Limited to cases with illness classified by DOH as definitely, probably, or possibly due to pesticide exposure.*
*** An agricultural case that occurred 12/01/2004, but was reported in 2005, is not included in this table.*

Age and Gender

In 2005, males (66) reported more occupational exposures than females (32). Females (45) and males (45) reported the same number of non-occupational exposures (Table 28).

There were 22 cases involving children 18 years of age or younger that were determined to be definitely, probably, or possibly related to pesticide exposure. Nineteen children were under the age of 12 and three were teenagers over the age of 12. Fourteen of the 22 children were at home at the time of their exposures. Thirteen of the children were under the age of six. Two of the three teen-agers were working at the time of their exposures; one was picking cherries and one was working as a retail stock clerk. The third teen-ager accidentally inhaled pesticide after he lit a gopher bomb. Table 28 lists the age and gender of 2005 DPP occupational and non-occupational cases.

Table 28. Occupational and Non-Occupational Cases* by Age and Gender, 2005

	Occupational		Non-Occupational		
Age	**Female**	**Male**	**Female**	**Male**	**Total**
0-5			5	8	13
6-11			3	3	6
12-18		2	0	1	3
19-29	7	18	5	7	37
30-49	20	41	12	13	86
50+	5	5	20	13	43
Total	***32***	***66***	***45***	***45***	***188***

** Limited to cases with illness classified by DOH as definitely, probably or possibly due to pesticide exposure.*

There were three incidents where multiple family members became ill from the same exposure:

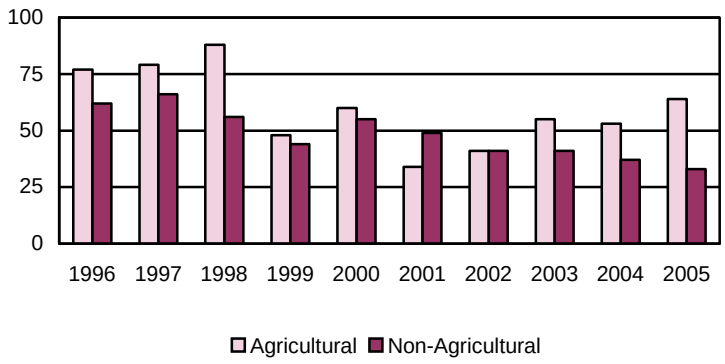
- mother and two children from burning agricultural pesticide containers
- parents and two children when pesticide from an orchard spray drifted onto their car
- four children after playing on lawn treated with herbicide

Occupational Cases of Pesticide-Related Illness

In 2005, 134 (53%) of all reported cases investigated by DOH involved a pesticide exposure on the job. Of these, 98 (73%) were classified as definite, probable, or possible cases. Sixty-four of the 98 DPP cases were agricultural workers, 33 were from other occupations and the occupation was unknown for one male worker. Figure 12 shows DOH agricultural and non-agricultural occupational cases for the years 2001 through 2005.

Though the number of agricultural DPP cases has increased since 2001, cases overall are lower than what was reported in the mid 1990's. The lowest number of agricultural DPP cases was in 2001. Since then, there has been a gradual increase back to the number of reported cases in the late 1990's. The increase in 2005 was due to an increase in drift cases from five in the previous year to twenty in 2005. DOH will monitor the number of agricultural cases to see if the increase continues.

Figure 12. Agricultural and Non-Agricultural Occupational Cases*, 2001 – 2005



** Limited to cases with illness classified by DOH as definitely, probably or possibly due to pesticide exposure.*

A Complex Occupational Case from 2005

DOH staff made a decision not to enter the following case into the Pesticide Information Management System (PIMS), therefore it is not included in the 2005 dataset. The case was referred to DOH by L&I. The individual, a licensed pesticide control operator, applied six different pesticides with different equipment to multiple application targets and sites over nine weeks. Because there was no discrete exposure event, it would be difficult to accurately characterize the case in PIMS. Although the case is not included in either the DOH narrative or appendix, DOH staff agreed that it should be mentioned in the 2005 PIRT Report.

Case Description

In March through May 2005, a 56-year-old male licensed pesticide control operator with prior medical problems used a half face respirator and a 3M 6001 organic vapor cartridge provided by his employer. He sprayed for insects under houses, apartment buildings, and commercial establishments, as well as inside and around the structures. He applied Monday through Friday at eight to ten addresses per day over the nine week period, for a total of 400 to 450 applications. The products applied included multiple pyrethroids, fipronil, borates and growth regulators. Only one product label required applicators to wear a dust/mist filtering respirator when working in unventilated spaces such as crawl spaces. Most of the pesticide product labels state “do not breathe spray mists or dusts” under the precautionary language.

He reported he wore a respirator and that symptoms began in March. He experienced double vision and progressively serious respiratory symptoms. In late April and May the symptoms did not subside during his days off. He saw his health provider twice in May and had both an x-ray and blood tests with inconclusive findings.

Investigation by DOH revealed that the filters provided by the employer from March on were less protective than the filters usually provided. This problem was corrected. Because of multiple exposure dates, application techniques and products, the DOH surveillance database could not accommodate entry of this case.

Agricultural Pesticide Incidents

In 2005, DOH investigated 106 reports of suspected pesticide-related illness involving agricultural operations. These exposures occurred when the pesticide application was intended for agricultural commodities such as fruit and field crops, nursery, livestock, and forest operations. Of the 106 cases, DOH classified 77 as definite (13), probable (29), and possible (35). In 2005, there were twice as many drift exposures as there were for any other single type of exposure (Table 29).

Table 29. Agricultural Occupational and Non-Occupational Cases by Source, 2005*

Year	Occupational	Non-Occupational	Total
Drift	20	10	30
Spray	12	0	12
Surface residue	16	0	16
Contact	8	0	8
Indoor air	1	0	1
Other	5	3	8
Unknown	2	0	2
Total Cases	***64***	***13***	***77***

** Limited to cases with illness classified by DOH as definitely, probably, or possibly due to pesticide exposure.*

The annual number of drift cases tends to be variable since a single incident can sicken multiple people. Drift to workers generally involves agricultural workers. Drift to non-workers generally involves people in their homes, driving on roads, in parks. In 2005, there were five incidents where more than one person was exposed to drift by an agricultural pesticide. The five incidents account for 22 (73%) of the 30 drift exposures (Table 30):

- Two residents were outside of their homes when exposed to pesticide that drifted from an application to pears
- Two residents were in their yards when exposed to pesticide that drifted from an application to apples
- Two apple thinners were exposed to pesticide that drifted from an adjacent apple orchard
- Four family members were exposed to pesticide that drifted in their car from an apple orchard
- Twelve greenhouse workers were exposed to pesticide that drifted from an application to a corn field

Table 30. Agricultural Drift to Workers and Others, 2001 – 2005*

Year	Occupational	Non-Occupational	Total
2001	14	13	27
2002	16	30	46
2003	12	12	24
2004	5	11	16
2005	20	10	30
Total Cases	***67***	***76***	***143***

** Limited to cases with illness classified by DOH as definitely, probably, or possibly due to pesticide exposure.*

Pesticides Involved in DPP Cases with Agricultural Workers

In 2005, there were 64 workers with illness/injury classified as definitely, probably, or possibly related to pesticide exposure during agricultural activities. Twenty-eight of the 64 agricultural workers were handling pesticides at the time of their exposure. Handling is defined as applying or mixing/loading, maintaining pesticide equipment, or transporting pesticides). Thirty-six workers were exposed to pesticide drift or residues on leaves while thinning, pruning, handling nursery plants, or doing other agricultural work.

Insecticides continue to be the most problematic class of pesticide in terms of reported illnesses and injuries in Washington agriculture. Thirty-eight (60%) of the 64 DPP cases among agricultural workers involved exposure to insecticides either alone or in combination with other pesticides. Fungicides were involved in 21 of the 64 exposures, although two-thirds were in tank mixes with insecticides. This reflects the common practice of tank mixing insecticides and fungicides in tree fruit applications. Herbicides were involved in 22 of the 64 cases, but 12 exposures were linked to a single drift incident.

Cholinesterase inhibiting insecticides are the class of insecticides most associated with illness reports. Nineteen (50%) of the 38 DPP insecticide cases in agricultural workers involved a cholinesterase inhibitor. Carbaryl was involved with nine cases, azinphos-methyl was involved with seven cases, and chlorpyrifos was involved with three cases.

Regarding cholinesterase inhibiting insecticides, there are three factors which may decrease the number of cases over time: planned phase-out of certain cholinesterase inhibitors by EPA, improvements in worker safety provided by the cholinesterase monitoring program, and increased use of alternatives to cholinesterase inhibitors, such as coddling moth mating disruption with pheromones.

The next most common pesticides associated with reported illness are the sulfur-based products (elemental sulfur and lime sulfur). There were ten cases in 2005, many of them in tank mixes. Sulfur-based products are mostly associated with skin irritation, eye injuries, and allergic reactions. There were eight cases associated with nicotinoid insecticides (imadacloprid, acetamiprid), twice the number of cases reported in 2004. This is a relatively new class of insecticides with expected low toxicity. DOH plans on tracking this trend in the future.

Table 31 shows the pesticide active ingredients for DPP cases involving agricultural workers. Since pesticides are commonly tank-mixed with other active ingredients, the number of total cases involving exposure to a specific chemical is often higher than indicated in the table. A general description of cases, recorded here as combinations of pesticides, is provided in the text of this section. Details on specific cases are also available in the Appendix C.

Table 31. Pesticide Involved in Cases* Involving Agricultural Workers by Ingredient, 2005

Pesticide	Handlers	Other Workers
Cholinesterase Inhibitors		
Aldicarb	1	0
Azinphos-methyl	2	1
Carbaryl	0	2
Carbofuran	1	0
Combination of cholinesterase inhibitors with other pesticides	6	6
Other insecticides		
Acetamiprid	0	1
Imadicloprid	0	2
Pyridaben (Sanmite)	0	1
Spiromesifen	0	1
Phosphine fumigants (aluminum/zinc phosphide)	5	0
Combinations of insecticides and other pesticides (no cholinesterase inhibitors)	4	5
Herbicides		
Alachlor + Atrazine	1	12
Glyphosate (mostly as Roundup)	2	0
Paraquat dichloride	0	1
Herbicide combinations	1	1
Fungicides		
Calcium polysulfide (lime sulfur)	3	0
Sulfur	1	2
Combinations of fungicides	1	0
Other		
Kaolin	0	1
Totals	***28***	***36***

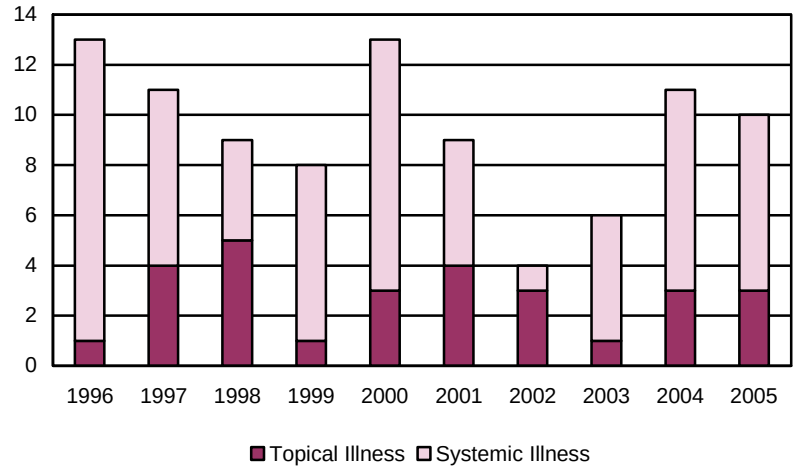
** Limited to cases with illness classified by DOH as definitely, probably, or possibly due to pesticide exposure.*

Cholinesterase-Inhibiting Insecticides

With the statewide implementation of cholinesterase monitoring by Department of Labor and Industries in 2004, there is continued interest in data specific to cholinesterase inhibiting insecticides. In 2005, DOH documented ten DPP cases in pesticide handlers associated with cholinesterase inhibitors. This is similar to 2004 and about average for the last ten years (Figure 12). Overall, cholinesterase inhibitors were associated with about one third of DPP handler pesticide cases in 2004 and 2005.

Figure 13 illustrates the number of handlers that experienced systemic (effecting the entire body) symptoms (7) and the number that had topical (effecting a particular surface area) symptoms (3) in 2005, and per year since 1996.

Figure 13. Type of Illness and Injury* for Handlers of Cholinesterase-Inhibiting-Pesticides, 1996 – 2005**



**Limited to cases with illness classified by DOH as definitely, probably, or possibly due to pesticide exposure.*
***Agricultural workers who handle cholinesterase inhibitors via mixing, loading, applying, or repairing equipment.*

Description of Cholinesterase Cases

Nine of the ten DPP cases were seen in an emergency room or doctor's office. The tenth case reported many of the hallmark symptoms of systemic carbamate insecticide poisoning and was advised to seek medical attention by the WPC. This person chose to manage their symptoms at home. Symptom severity was rated moderate in three cases and low in seven cases. There were two ocular exposures that resulted in eye pain, tearing and conjunctivitis and two cases of red itchy rash that corresponded to the area of skin exposure. There were six cases of systemic symptoms, primarily: nausea, dizziness, sweating, muscle fasciculation, and headache.

Seven cases occurred in apple orchards mostly while applying with ground sprayers, two cases occurred during application or loading in potato production, and one occurred during pesticide mixing in cranberries. The pesticides associated with reported illnesses in handlers in 2005 are listed in Table 32. Active ingredients are listed when the exposure involved that pesticide alone, but in six of ten cases, cholinesterase inhibitors were tank mixed with: supreme oil, sulfur products, fungicides, growth regulators and various other products. Including the tank mixes: Azinphos-methyl exposure occurred in a total of three of ten handler cases (one with topical symptoms, two with systemic symptoms), carbaryl was involved with three cases (two with topical symptoms, one with systemic symptoms) and chlorpyrifos was involved with one topical case. Phosmet, aldicarb, and carbofuran were each involved with one systemic case.

Table 32. Type of Illness* for Handlers of Cholinesterase Inhibiting Pesticides, 2001 – 2005**

Pesticide	2001		2002		2003		2004		2005		Totals	
	S	T	S	T	S	T	S	T	S	T	S	T
Azinphos methyl					1		2		1	1	4	1
Chlorpyrifos							2				2	
Dimethoate	1							1			1	1
Disulfoton							1				1	
Ethoprop					1						1	
Aldicarb									1		1	
Carbofuran									1		1	
Combinations of cholinesterase inhibitors with other products	4	4	1	3	3	1	3	2	3	3	14	13
Totals	***5***	***4***	***1***	***3***	***5***	***1***	***8***	***3***	***6***	***4***	***25***	***15***

**Type of illness/injury:* *S = Systemic: Any health effects not limited to the skin and/or eye.*
T = Topical: Health effects involving only the eyes and/or skin.

***Agricultural workers who handle cholinesterase inhibitors via mixing, loading, applying, or repairing equipment.*

Five of these ten handlers were enrolled in the state Cholinesterase Monitoring Program. Only one had more than 20 percent depression of cholinesterase and triggered an alert and L&I follow-up. This case involved a male applicator using an airblast sprayer in an apple orchard. He had been applying a tank mix of Lorsban 4E, dormant oil, and micronized sulfur for a three week period. He then developed acute eye symptoms when the wind picked up and the spray hit his face and eyes. He was wearing safety glasses which do not protect eyes as well as goggles. He sought treatment for his eye symptoms and returned to work. His visit to a health care provider was reported to DOH. Two follow-up tests conducted ten and 17 days later showed more than 20 percent depression of both red blood cell and serum cholinesterase. These triggered alerts to L&I. Although organophosphates are absorbed during ocular exposure, it is possible that his depression was due to several other exposure pathways identified during L&I follow-up on the alert.

> *A 61-year-old male applicator had ocular symptoms after applying with an air blast sprayer. The wind came up and he reported that spray hit his face and neck but not directly into his eyes. He was wearing safety glasses not goggles. He sought medical care the next day. He had been spraying the same mix over a three week period and was enrolled in the cholinesterase monitoring program. Two tests done ten days and 17 days after exposure showed RBC and serum cholinesterase were depressed more than 20 percent. L&I and DOH made a field visit together to investigate.*

This case illustrates the importance of the cholinesterase program in identifying and correcting problem work practices. Without cholinesterase testing, the follow-up on this case would have been limited to DOH outreach on preventing eye exposures by wearing goggles or a full face respirator during airblast spraying. Because of L&I involvement, the workplace was able to correct problems such as the use of absorbent hooded sweatshirts and ball caps under rain suits, incomplete decontamination of gear and hands during breaks, and parts of the worker training that employees did not properly understand.

Crops Associated with DPP Cases for all Agricultural Pesticides

Table 33 shows the crop associated with the 77 DPP cases resulting from agricultural pesticide use in 2005. The crops involved were fruit (50) and field or vegetable (21). Of the remaining six exposures, two involved pesticides used for aphids/mites at nurseries, three resulted from burning agricultural pesticide containers, and one occurred when water from a hose previously used to mix herbicides splashed on a worker who was using the hose to wash off farm machinery.

In 2005, as in past years, the leading crops associated with reported cases are tree fruit, one of the primary agricultural sectors of the state economy. These are labor intensive crops requiring workers to be thinning, pruning, or harvesting during the same times of year that pesticides are applied. Dense planting of trees impedes the applicator's line of sight and requires communication with farm foreman and with neighboring farms to keep all workers clear of pesticide applications. The airblast sprayer commonly has no enclosed cab, as this does not fit well between the rows of trees. This leaves drivers of airblast sprayers relatively exposed to the high pressure spray and reliant on personal protective equipment to protect them from contact with spray. The high pressure spray is also prone to drift.

Forty-one (82%) of the 50 cases involving fruit production were agricultural workers. The other nine cases were not working and were exposed to pesticide drift at their homes. Twenty-one of the 41 agricultural workers were pesticide handlers. Twenty workers were pruning trees or thinning/picking fruit at the time of their exposure.

Cases Resulting from Applications to Field Crops

In 2005, there were ten incidents with 21 cases involving pesticide applications to field crops (Table 33). The field crops included corn, potatoes, alfalfa, and wheat. Twenty of the 21 cases were agricultural workers and seven of the 20 workers were handling pesticides at the time of exposure. Twelve cases were greenhouse workers who were exposed to pesticide drift from an application at an adjacent corn field. One non-occupational case was a resident exposed to drift from a potato field application.

Table 33. Agricultural Cases* by Target and Activity, 2005

	Applying	Mix/Load/ Repair	Routine Work	Outdoor Living	Indoor Living	Total
Fruit						
Apples	12	2	14	5	1	34
Cherries	3		5	1		9
Pears	1			2		3
Grapes	2		1			3
Cranberries		1				1
Field and Vegetable Crops						
Corn	1		12			13
Potatoes	1	3	1	1		6
Alfalfa	1					1
Wheat	1					1
Other Agricultural						
Ornamental nurseries			2			2
No applicable target			1	3		4
Totals	***22***	***6***	***36***	***12***	***1***	***77***

** Limited to cases with illness classified by DOH as definitely, probably, or possibly due to pesticide exposure.*

Non-Agricultural Pesticide Incidents

Of the 252 cases investigated in 2005, 147 were associated with non-agricultural pesticide use. DOH determined 111 (76%) of these to be definitely, probably, or possibly related to pesticide exposure (Table 34). Non-agricultural incidents include pesticide applications or spills that occur at homes, commercial buildings, industrial sites, or from roadside spraying. Of the 111 DPP non-agricultural exposures, 72 (65%) were at a residential site at the time of their exposure. Three of these exposures were from pesticides drifting from their intended application site: two were from an application to a school yard and one was from a roadside application. Thirty-four (31%) of the individuals were working at the time of exposure and 77 (69%) were not at work.

Table 34. Exposure Site for Non-Agricultural, Occupational and Non-Occupational Cases, 2005*

Exposure Site	Occupational	Non-Occupational
Residential building or grounds (home, apt)	6	66
Other institution (nursing home)	2	0
Other manufacturing	5	0
Office, retail or service businesses	13	4
Park, lake, camp grounds	1	1
Road, right-of-way or vehicle	4	6
Other	2	0
Unknown site	1	0
Total non-agricultural pesticide use	***34***	***77***

** Limited to cases with illness classified by DOH as definitely, probably, or possibly due to pesticide exposure.*

Non-Agricultural Occupational

In 2005, 34 non-agricultural cases occurred on-the-job; 23 were males and 11 were females. Eighteen of the 34 cases were handling pesticides at the time of exposure. The following example is a non-agricultural, occupational incident from 2005:

> *A 19-year-old male roofer was exposed to pesticide mist when a coworker sprayed a nearby wasp nest. He sought medical care for eye and respiratory symptoms. DOH classified the case as probably related to the pesticide exposure.*

Non-Agricultural Non-Occupational

In 2005, 77 exposures occurred where the person was not working and the release was not associated with agriculture. Sixteen were children and 61 were adults over the age of 18. Of the 61 adults, a few more were women (32) than men (29). Of the 77 non-occupational exposures, 66 occurred in homes (Table 34).

The following is an example of a non-agricultural, non-occupational case classified as possibly related to the exposure:

> *A 61-year-old female condo owner hired a pest control operator to treat her home when she found roaches. She stayed out of the home for approximately nine hours that day. She returned at 10:00 p.m. and opened windows for ventilation as directed. The next day she noticed some odor, turned up the heat, and by 9:30 p.m. that evening, reported feeling upper respiratory effects. She showered and the next day the only remaining symptom was hoarseness. DOH classified the case as possibly related to the pesticide exposure.*

Non-Agricultural Non-Occupational Exposures by Applicator Type

In 2005, ten of the 77 non-agricultural, non-occupational DPP cases were exposed to applications by professional (paid) applicators. Three cases involved herbicide applications to landscape weeds and one involved an insect application that drifted to a neighbor's home. Four people became ill from roadway applications: three bikers were sprayed in a mosquito application and one roadside herbicide application drifted to a nearby home. Two people were exposed to applications to insects in buildings (Table 35).

The remaining 67 exposures were due to applications made by home owners, landlords, and coworkers. Specifically, these involved pesticide treatments of:

- fruit trees, insects, slugs, gophers (10)
- insects in the home (17)
- treatments to people or pets for fleas, lice, or biting insects (10)
- herbicides/treatments for moss or weeds (16) or
- accidental ingestion or release of pesticide products (14)

Table 35. Target Pest for Non-Agricultural, Non-Occupational Cases Exposed to Pesticide Applications by Professional* and Non-Professional Applicators, 2005**

	Professional Applications	Non-Professional Applications
Landscape/Garden Use		
Weeds and moss	3	17
Fruit trees	0	2
Insects/plant disease	1	5
Slugs	0	2
Gophers/moles	0	1
Use In/Around Structures		
Fleas/roaches/other insects	2	16
Moss	0	1
Applications to People/Pets		
Lice	0	4
Insect repellents	0	3
Applications to pets for fleas	0	2
Accidental release or ingestion	0	14
Area-wide		
Mosquitoes (roadway)	3	0
Weeds (roadway)	1	0
Total	***10***	***67***

** Professional is defined as persons paid (licensed or unlicensed) to apply the pesticide.*
*** Limited to cases with illness classified by DOH as definitely, probably, or possibly due to pesticide exposure.*

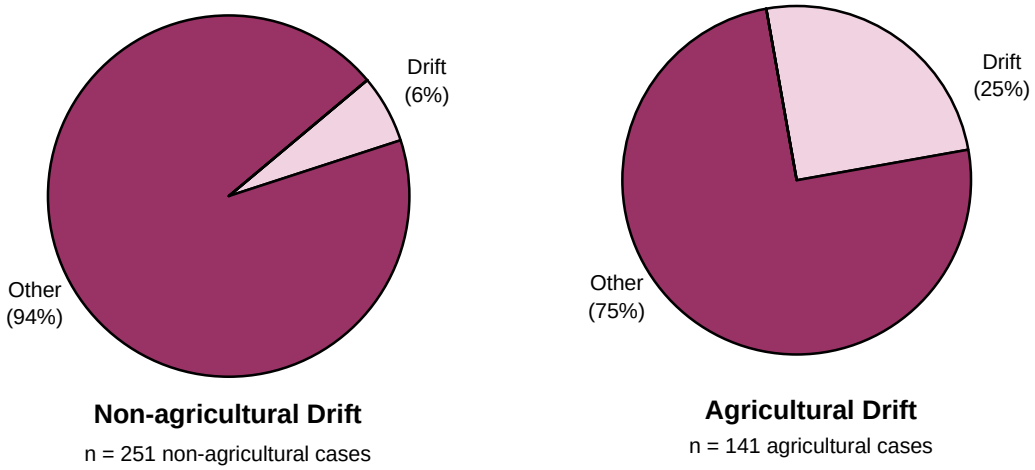
Highlight on Pesticide Drift

2004 and 2005 Pesticide Spray Drift and Human Health Incidents

Exposure to pesticide drift is an important cause of documented pesticide-related illness in Washington. The DOH data were compiled for drift incidents (applications that drifted) and cases (people reporting symptoms) for the years 2004 and 2005. A drift incident may involve multiple cases. The DOH Pesticide Program reviewed drift data from 2002 through 2003 in the 2004 PIRT Report. Since pesticide illness reports are referred to DOH by other PIRT agencies, all cases of drift-related illness should be included in the DOH dataset. The analyses in this report include only cases that DOH classified as definitely, probably, or possibly (DPP) related to pesticide exposure.

During the years 2004 and 2005, pesticide drift was involved in 36 incidents involving 62 cases of illness or injury. This is a decline from the previous two-year data set which involved 58 incidents and 95 people with symptoms. Figure 14 shows drift as a proportion of all DOH DPP cases and incidents for 2004 and 2005 combined. Drift was a relatively small factor in reported cases of urban and suburban use of pesticides. Only ten incidents involving 15 people were classified as definite, probable, or possible during this two year period. Agricultural drift continued, however, to be a significant source of pesticide illness and injury in reported agricultural cases.

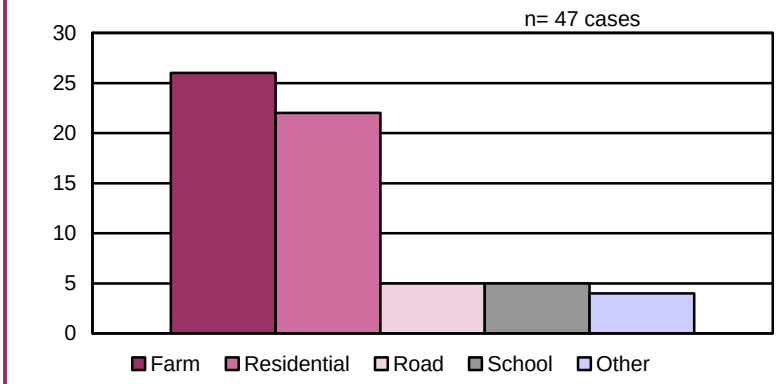
Figure 14. Drift as a Proportion of all DOH DPP Cases,



Agricultural applications to farms and nurseries were involved in 26 (72%) of the 36 total incidents and 47 (76%) of the 62 cases. However, farmers and farm workers were not the sole recipients of pesticide drift. Figure 15 shows DOH drift cases by site of exposure. More than half the people with symptoms (58%) were residents in nearby homes, people driving their vehicles on public roads, or people in other nearby buildings. As housing developments continue to expand into agricultural areas, reports of agricultural drift onto residential property may

increase. Possible mitigations include changes in county zoning for housing developments, use of vegetative buffers at the edge of agricultural lands, and use of best management practices to prevent pesticide drift.

Figure 15. Site of Exposure, 2004 – 2005, DPP Cases



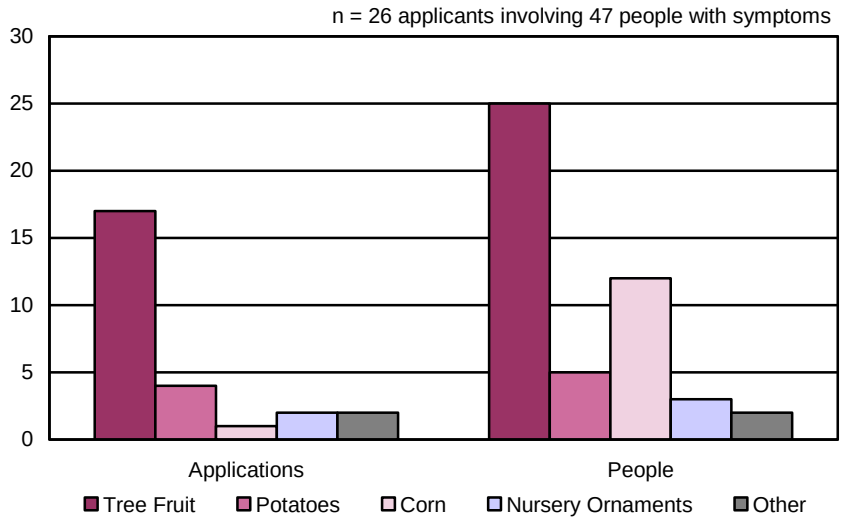
Cases of agricultural drift have declined slightly over the last six years. The number of people involved continues to be highly variable and can be influenced by a single case with a large number of people involved.

Table 36. DOH cases* involved with Agricultural Pesticide Drift

Year	Incidents	DPP cases
2000	20	59
2001	11	23
2002	25	46
2003	16	24
2004	13	17
2005	13	30

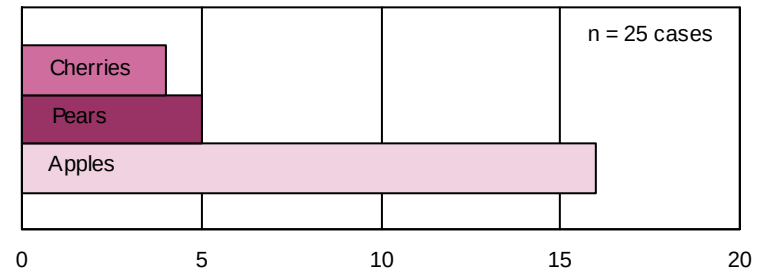
** Limited to cases with illness classified by DOH as definitely, probably or possibly due to pesticide exposure*

Figure 16. DOH Agricultural Drift DPP Cases by Crop Type, 2004 – 2005



Of the 26 incidents of drift involving agricultural applications during 2004 and 2005, 17 (65%) involved applications to tree fruit Figure 16. Pesticide applications to corn do not usually appear as a significant contributor in the DOH data set. Nearly all the cases attributed to corn in this time period were involved in one case of drift to greenhouse workers nearby.

Figure 17. DOH Drift DPP Cases Involving Tree Fruit, 2002 – 2003



Tree fruit cases can be categorized by the specific target of the pesticide application. Most of these occurred during treatment of apple orchards Figure 17. This finding is consistent with past years and, according to 2005 data published in the United States Department of Agriculture 2005 Fruit Summary published in July 2006, the number of reported cases above appears to be proportional to the number of acres planted in these crops in Washington in 2005.

Pesticides Associated with Agricultural Drift Illness/Injury

Insecticides were involved in 53 percent of reported drift-related illnesses. Fungicides were involved in 30 percent of cases, although in half these cases the fungicides were tank-mixed with insecticides. Herbicides comprised only 16 percent of the reported applications that drifted but were associated with 32 percent of the cases of illness because of one incident in which a mix of atrazine and alachlor sickened 12 people. Figure 18 shows the type of pesticide involved with DPP agricultural drift cases.

Figure 18. DOH Drift DPP Cases Involving Tree Fruit, 2002 – 2003

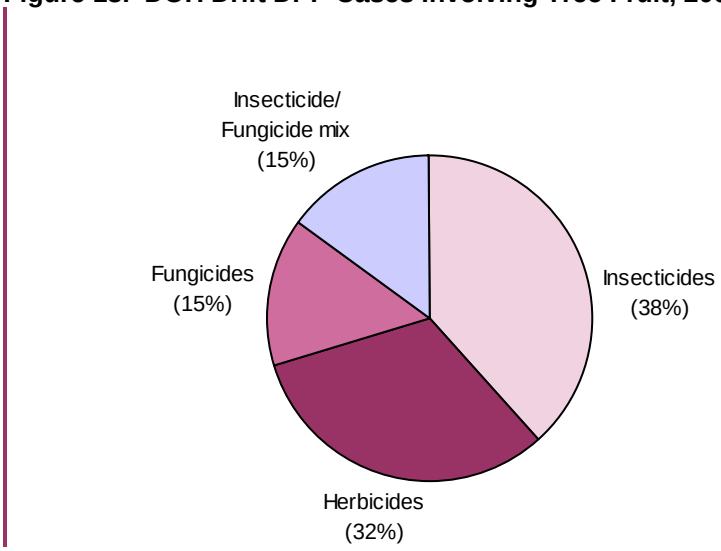


Table 37 shows the pesticide involved with reported agricultural drift cases* for 2004 and 2005. When a pesticide was part of a tank mix they were tallied separately as “in combinations”. Exposure to a cholinesterase inhibitor was involved with one third of agricultural drift cases. Chlorpyrifos and azinphos-methyl were involved in multiple cases. Carbaryl and methamidiphos were each involved with one case. Petroleum oils do not have a high toxicity but were frequently part of the tank mix with cholinesterase inhibitors and other insecticides. These horticultural oils were present in seven applications that drifted involving 13 DPP cases.

Table 37. Pesticide Involved with Reported Agricultural Drift cases*, 2004 - 2005

Pesticide		Applications	DPP Cases
Azinphos-methyl	Alone	2	2
	In combinations	2	3
Chlorpyrifos	Alone	2	2
	In combinations	3	8
Other cholinesterase inhibitors	In combinations	2	4
Other insecticides		5	6
Herbicides		4	15
Lime sulfur/ sulfur	In combinations	3	3
Copper hydroxide	In combinations	3	3

The pesticides involved with drift incidents reflect the acute toxicity and the frequency of use in orchards. For instance, according to the USDA 2005 Fruit Summary, the two most widely applied insecticides in apple orchards in 2005 were petroleum distillates (218,240 acres) and azinphos-methyl (200,880 acres). These were followed by carbaryl (154,070 acres) and chlorpyrifos (98,890 acres). All are typically applied by airblast sprayers. While there are more applications of carbaryl, it has a lower acute toxicity than chlorpyrifos and is associated with only one DPP case in 2005 versus ten for chlorpyrifos.

Medical Outcome of Drift Exposures

The most commonly reported symptoms of pesticide drift exposure were irritation and mild systemic symptoms. These included respiratory symptoms such as burning in throat, shortness of breath, coughing, wheezing; skin irritation and rash; eye irritation; and headache and nausea. Thirty (48%) of the 62 individuals reporting symptoms sought health care in an emergency room or a doctors office. The remaining individuals had two or more symptoms but did not seek health care. This included five people identified during investigation of a school incident and ten people identified during an investigation of a drift to greenhouse workers.

Risk Factors for Drift-Related Illness in Washington

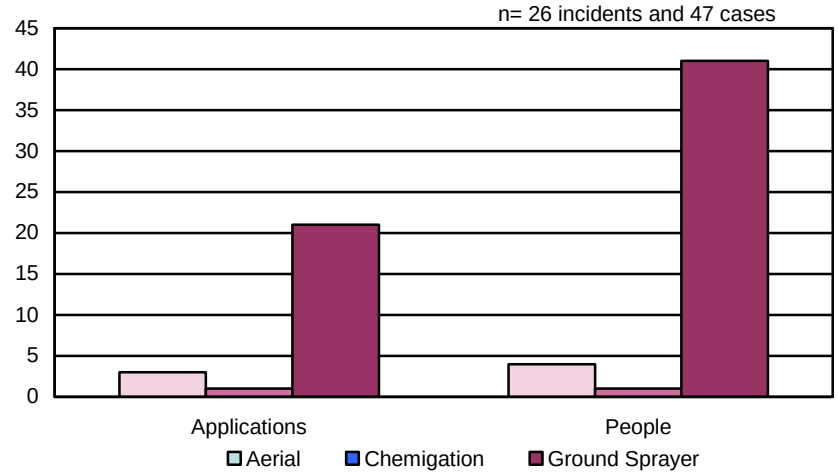
Risk factors for drift-related illness in Washington include toxicity of the pesticide as mentioned above and application equipment, weather, applicator training, and proximity to residences.

Equipment

The equipment most frequently associated with drift incidents reported to DOH were powered ground sprayers and aerial equipment (Figure 19). These are also the most frequently used type of equipment for the application of pesticides to tree fruit commodities in Washington. Ground applications generally involve the use of airblast sprayers. Airblast sprayers use high pressure and a fine spray to evenly coat both sides of tree leaves in orchards. Use of equipment that produces a fine spray is more likely to result in drift because small droplets are

more easily carried by the wind than large droplets. Aerial equipment lays a swath of spray in the air above the crop. Best management practices for control of drift with these types of equipment include the use of air induction nozzles, lowering pressure and increasing water volume to increase droplet size, and avoiding weather conditions that favor drift. Detailed guidance on best management practices for different equipment types is available from the National Spray Drift Task Force at http://www.agdrift.com/Text%20pages/Pub_PDF.htm.

Figure 19. DOH Drift DPP Agricultural Cases by Type of Application Equipment, 2004 - 2005



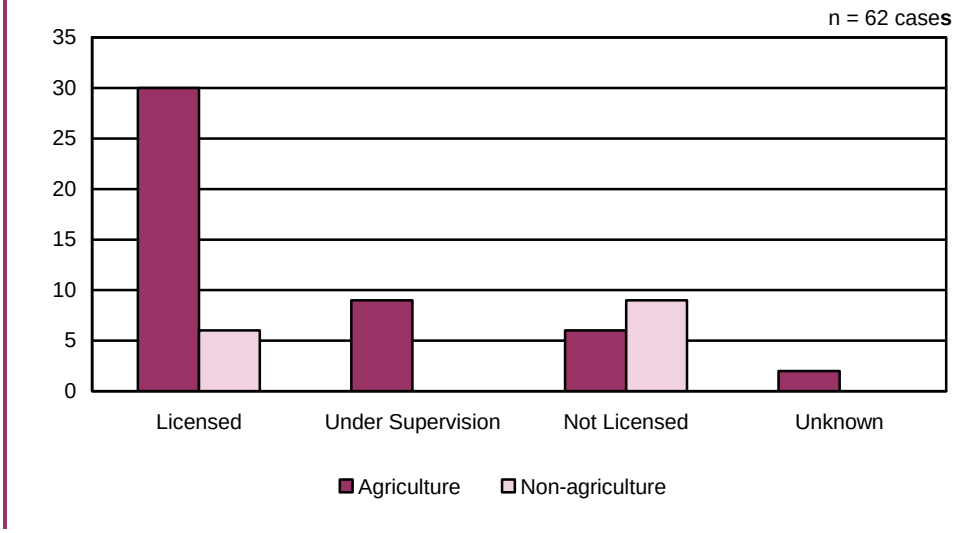
Weather

Weather conditions such as wind speeds over ten mph, presence of wind gusts, and temperature inversions increase the risk of pesticide drift. Applicators are required to report wind speed, wind direction, and air temperature on pesticide spray records for each application, but most spray records associated with DOH cases did not indicate that adverse weather conditions were present. Spray records commonly recorded wind speed in generic terms such as “calm” and did not cite the source of their observations (an on-site anemometer, or visual observation). Eye witness accounts of windy conditions were sometimes in conflict with wind speed recorded on spray records. In an effort to collect more reliable and objective weather data, DOH explored linking DOH data to local weather station data from Public Agricultural Weather Stations (PAWS). The nearest PAWS station was often too far from the site to provide accurate wind readings, as local topography can be a significant factor in wind speed and direction. In 2007, DOH will test a project to link drift events to weather data from a higher resolution meteorological weather model that includes NW topography (MM5) to see if this can provide a better source of accurate data to track whether conditions are a risk factor for drift.

Applicator Training

Although DOH does not specifically track applicator misjudgment as a risk factor, it appears that applicator error was a common feature of drift cases. Thirty (58%) of the 42 drift incidents in the DOH data set involved a licensed pesticide applicator. These are applicators who have passed a licensing test and who must complete continuing education credits to maintain their license. State pesticide law allows an unlicensed person to apply pesticides if they are working under the supervision of a licensed applicator (Figure 20).

Figure 20. DOH Drift DPP Cases by License Status of Applicator, 2004 – 2005



Proximity to Residences

More than half the people with symptoms (58%) were residents in nearby homes, people driving their vehicles on public roads, or people in other nearby buildings Many of these residences border working agricultural land. There are a variety of methods for preventing drift to nearby residences including observing buffer zones, use of alternative spray methods or non-spray methods when controlling pests near residences, planting trees along borders to obstruct drift, land use planning that includes buffers between residential housing and agricultural operations, and coordination with neighbors to spray at times when exposure to an accidental drift is unlikely. A recent analysis of WSDA drift investigation data showed that while drift distances were highly variable, they were commonly documented 100 feet from airblast sprayers and 1000 feet from aerial applications. More information on this study is available at http://agr.wa.gov/PestFert/Publications/docs/2004Driftdistance61804.pdf.

Drift Incidents Investigated by the Washington Department of Agriculture

The WSDA investigates complaints about drift associated with crop injury, bee kills, residue on vehicles and property, and complaints about human exposures to drift. If human exposure is associated with symptoms, WSDA refers the case to DOH, so there is some overlap between the WSDA and DOH data sets in this category.

In 2004, WSDA received 64 complaints about drift to property or crops and 13 complaints about human exposures to drift. In 2005, WSDA received 76 complaints about drift to property or crops and 22 complaints about human exposure to pesticide drift. Drift was verified by the WSDA investigator in 49 (64%) of 2004 cases and 58 (59%) of 2005 cases. In the other cases, allegations of human exposure to spray drift could not be substantiated by environmental samples or visual evidence of pesticide damage. Complaints of drift damage to crops and ornamentals were sometimes determined to be from drought, insects or frost. Table 38 shows the complaints received by WSDA involving allegations of pesticide drift for 2004 and 2005.

Table 38. WSDA Drift Complaints, 2004 – 2005

Year	General Drift Complaints	Drift Involving Human Exposure	Total
2002	59	28	87
2003	45	17	62
2004	64	13	77
2005	76	22	98

** Drift cases involving alleged human illness are referred to DOH and are in the DOH data set if they were considered definitely, probably, or possibly related to the pesticide exposure.*

Conclusions and Recommendations

Pesticide drift is an important cause of pesticide-related illness in Washington. Prevention efforts should target ground applications to tree fruit. Strategies for preventing drift may include increased use of non-pesticide pest management (mating disruption with pheromone, for example), new technologies that reduce drift (such as air induction nozzles and tunnel sprayers), education of pesticide applicators and farm managers about best management practices for drift reduction, recognition and incentives for applicators and farms who operate with best management practices, and disincentives to applicators and farm managers who cause drift.

More attention is needed to protect residences near agricultural fields. Use of buffers and vegetated strips may help prevent drift from reaching neighboring residences. Adoption of new nozzle and sprayer technology could reduce production of driftable particles. Pre-notification of nearby residents would allow them to close windows and further minimize the effect of an accidental drift.

Monitoring of pesticide drift should be expanded by PIRT agencies to include more systematic and detailed information about risk factors. It would be helpful to track: weather conditions at the time of the drift, type of ground sprayer and any use of drift mitigation technology, equipment settings, whether best management practices were used, and how far drift traveled. To accomplish this, DOH, WSDA, and L&I will collect a common checklist of factors in 2007 drift investigations.

Highlights of DOH Prevention Activities 2006

Local, State and Federal Government

The DOH Pesticide Program provides technical assistance to federal, state and local agencies, as well as individuals, on pesticide toxicology and human health effects. The Pesticide Program staff also participates in outreach and pesticide safety education for agricultural workers and the public.

DOH Pesticide Program staff were involved in the following activities in 2006.

Federal and Other State's Agencies

- Presented on "Assessment of Preventable Causes" at the Winter Conference of Sentinel Event Notification System for Occupational Risk (SENSOR) – a national pesticide workgroup.
- Presented the Pesticide Program's NIOSH grant results to the Council of State and Territorial Epidemiologists.
- Participated in the NIOSH National Occupational Research Agenda (NORA) Town Hall with presentation of information on the DOH Pesticide Program and recommendations for NIOSH's ten-year research agenda.
- Responded to a NIOSH request with examples of eight cases in which PPE was used improperly for the EPA Pesticide Program Dialogue Committee Work Group on Worker Protections.
- Forwarded pesticide illness monitoring data to NIOSH for compilation of national pesticide illness statistics, http://www.cdc.gov/niosh/topics/pesticides/
- Participated in phone conference with NIOSH, the EPA chemical manager of pyrethrins, and staff from Oregon Pesticide Program to gather details about health effects in cases involving pyrethrins and pyrethroids. A fatality in Oregon related to the use of these substances resulted in a lengthy discussion. Washington and Oregon plan to publish a joint article on their states' findings in 2007.
- Provided example herbicide cases and safety slides to Bureau of Land Management staff in Idaho for training their tri-state weed management crew.

Washington – State and Local Agencies

- Presented to L&I's Chemically Related Illness staff on pesticide-related illness reporting and pesticide toxicology.
- Presented on pesticides and Parkinson's disease at the Washington State Environmental Health Association annual meeting in Vancouver.
- Presented at the Yakima PIRT meeting on the Pesticide Program's NIOSH grant.
- Supported L&I's Cholinesterase Monitoring Program by maintaining the Cholinesterase Monitoring Data System (CMDS) application, which processes and stores cholinesterase records and provides alert notification and other reports to L&I.
- Attended the UW Pacific Northwest Agricultural Safety and Heath (PNASH) Center Advisory Board meeting.
- Provided eight cases of pesticide related illnesses/injury to the UW PNASH Center for use in their new medical education modules.
- Presented to Washington State Commission on Pesticide Registration on the Pesticide Program's exposure and prevention data.
- Presented at the Washington State Commission on Pesticide Registration's 2006 Pest Control Tour on cholinesterase monitoring and DOH pesticide incident reporting and tracking.
- Provided technical support to Thurston County Environmental Health on their pesticide policy.
- Provided technical support to the DOH School Environmental Health and Safety Program for revising the "State Board of Health Rules on School Environmental Health and Safety for K-12 Schools."

Licensed Pesticide Applicators

In 2006, DOH staff presented information on the prevention of pesticide-related illness to licensed pesticide applicators and pesticide handlers at training, recertification and continuing education courses sponsored by Washington State University and WSDA. Presentations were in English and Spanish and covered pesticide safety, use of personal protective equipment, and the acute and chronic health effects of exposure to pesticides. Approximately 930 applicators participated in these trainings at nine locations in eastern and western Washington.

Farm Workers and General Agricultural Community

- Provided pesticide education and safety information at Commission on Hispanic Affairs meetings in Yakima, Quincy, Olympia, Mattawa, and South Central Seattle.

- Presented update on *Pesticide Incident Summary Reports* to Commission on Hispanic Affairs.
- Attended the two day conference in California on Western Agricultural Health and Safety.
- Attended the Western Migrant Stream Conference in Portland.
- Met with farm worker advocates at the Northwest Environmental Justice Project and Columbia Legal Services.

Agricultural Growers Groups

As in previous years, DOH staff members maintain contact with agricultural grower groups at regular board meetings of the Pesticide Advisory Board, the Washington State Commission on Pesticide Registration and the Washington Friends of Farms and Forests.

- Attended a WSDA sponsored meeting on Farm Worker Education and Outreach for grower groups that provide outreach to farm workers. Developed a detailed contact list of meeting attendees for future collaboration.
- Toured an apple orchard and packing house in Naches.

Health Care Providers

- Provided two cases of pesticide-related illness to staff at the Migrant Clinician's Network for use at a national farm worker's conference and in training materials for practicing clinicians.
- Visited 20 hospital emergency departments and 31 health care providers in 12 eastern Washington counties. During these visits, staff provided information on the Pesticide Program, reminded providers that pesticide illnesses is a Notifiable Condition, and distributed the newest revision of *Recognition and Management of Pesticide Poisonings* and other publications on pesticides.
- Presented to health care providers at three clinics with DOH Agency for Toxic Substances and Disease Registry staff in Yakima, Wenatchee, and Sunnyside. Reviewed the importance of obtaining exposure histories in the clinical setting, explained the DOH Pesticide Illness Monitoring and Prevention Program, and emphasized the importance of reporting pesticide-related illness as a Notifiable Condition.

General Public

- Distributed pesticide education and safety information at the annual Washington Health Foundation’s Latina Health Fair in Seattle.
- Served as a Community Advisory Board member for Fred Hutchinson, and attended a meeting focused on Hispanic Health Promotion.

- Presented at Master Home Environmentalist program sponsored by the American Lung Association. The audience included the American Lung Association, Yakima Valley Farm Workers Clinic, Group Health, Klickitat County Health Department, Yakama Indian Nation, Yakima Neighborhood Health Service and University of Washington Masters' program student nurses.
- Attended the EPA Environmental Justice Listening Session.
- Supported Public Health Seattle and King County in public response to gypsy moth spraying.
- Responded to requests from the public for information regarding pesticides and pesticide safety.
- Continued to provide updated information for urban and suburban pesticide users and schools at Urban Pesticide Education Strategy Team (UPEST) website.

Letters and Publications (Appendix G)

- Submitted a letter to the EPA endorsing a petition put forward by the attorneys general of 15 states. This petition recommended that the EPA make regulatory changes to require that pesticide manufacturers disclose inert ingredients in their products. Disclosure of inert ingredients would improve diagnosis and treatment of patients with pesticide illness, protect consumers with known allergies or sensitivities, and enhance tracking and evaluation of state pesticide illness surveillance data.
- Published an article in *Northwest Bulletin: Family and Child Health* on "Preventing Pesticide Exposure through Illness Monitoring in Washington State" explaining how DOH uses pesticide illness data for policy recommendations and education to protect children and families from pesticide exposure.
- Co-authored a paper on "Acute Pesticide-Related Illness among Emergency Responders 1993-2002" published in *American Journal of Industrial Medicine*. The paper reviews data on pesticide illness rates in emergency responders and calls for greater prevention efforts in this group. http://www.cdc.gov/niosh/topics/pesticides/pdfs/AJIM-emerg-responder.pdf

Partnerships

The DOH Pesticide Program staff participates on various advisory boards, stakeholder committees, and other organizations around the state:

- Catholic Rural Life "Protecting Our Future": a Pesticide Education Project
- Cholinesterase Monitoring Stakeholder Committee for L&I
- Food and Environmental Quality Laboratory, Washington State University
- Fred Hutchinson Cancer Research Center "For Healthy Kids"

- Pacific Northwest Agricultural Safety and Health Center Advisory Board
- Pacific Northwest Agricultural Safety and Health Center "El Proyecto Bienestar”
- Pesticide Advisory Board
- Pesticide Incident Review and Tracking Panel (chair and coordinator)
- Spanish Public Radio KDNA (Community Advisory Board)
- Thurston County Vegetation Management Board
- Toppenish Farm Workers Clinic (Community Advisory Board)
- Washington Friends of Farm and Forests (non-voting, advisory member) educational member
- Washington State Commission on Hispanic Affairs
- Washington State Commission on Pesticide Registration (non-voting, advisory member)

Labor and Industries

Washington State Department of Labor and Industries' summary of pesticide-related activity for 2005.

Background

Four divisions in the Department of Labor and Industries (L&I) are involved in pesticide-related activities: L&I Division of Occupational Safety and Health (DOSH), L&I Specialty Compliance Services, L&I Field Services and L&I Industrial Insurance Services.

- DOSH has a mandate to ensure workplace safety and health. DOSH creates workplace safety and health regulations, provides stakeholder training and outreach, holds the Annual Governor's Safety Conference and Agricultural Safety Day, inspects workplaces for safety and health, handles appeals of safety and health violations, and generates the L&I section of the PIRT report. DOSH enforces the Agriculture Worker Protection and Cholinesterase Monitoring rules and runs the Cholinesterase Monitoring program. L&I Consultation Services, a division of DOSH, provides no cost safety consultations to employers. These consultations are confidential and will not be discussed in this report.
- The L&I Field Services Division includes specialty compliance personnel, inspectors and consultants based in regional field offices.
- The L&I Specialty Compliance program issues farm labor contractor licenses, enforces agricultural wages, breaks, rest periods, recordkeeping requirements, and enforces prohibited agricultural jobs for minors.
- L&I Industrial Insurance Services staff provides Risk Management and Loss Control assessments. The Safety & Health Assessment & Research for Prevention group investigates pesticide-related issues. The Claims Program administers wage replacement and medical benefits through worker compensation to Washington workers who become ill or injured on the job.

Pesticide-related activities of DOSH and Industrial Insurance Services are included in this PIRT report.

Cholinesterase Monitoring

L&I adopted Chapter 296-307-148 WAC, Cholinesterase (ChE) Monitoring, in December 2003. The cholinesterase monitoring rule became effective February 1, 2004. This rule requires agricultural employers to document the number of hours their employees spend handling toxicity category I or II organophosphate or N-methyl carbamate pesticides. Over-exposure to these pesticides can result in depression of cholinesterase, an enzyme that serves as the nervous system's "off switch" and is essential to the normal function of the nervous system. A depression in cholinesterase activity can lead to a range of physical symptoms, including blurred vision, headache, increased sweating, nausea, diarrhea, and fatigue. A severe depression can result in slowing of the

heart rate, seizures, unconsciousness, respiratory failure, and death. Monitoring of blood cholinesterase activity in both red blood cells and serum can detect cholinesterase depression before the onset of illness.

Employers are required to offer their employees the opportunity to participate in the cholinesterase monitoring program if the employee's number of handling hours of target pesticides is expected to exceed the threshold of 30 hours in 30 consecutive days, as defined by the rule. Workers are given the option to decline participation after the benefits of monitoring are explained to them at the clinic. An employee who has declined to participate may chose to opt into the monitoring program at a later date if they remain eligible, but unless they ask to participate, monitoring is not required to be offered to them again. Workers who participate receive baseline cholinesterase testing, which includes both red blood cell (RBC) and serum levels, prior to use of covered pesticides. Cholinesterase levels are tested periodically during the application season and are compared to baseline cholinesterase levels. A 20 percent or more decrease from baseline for either RBC or serum indicates a cholinesterase depression and requires the employer to perform a workplace evaluation. A decrease of greater than or equal to 30 percent for RBC cholinesterase or greater than or equal to 40 percent for serum cholinesterase from baseline requires employers to remove the handler from exposure to cholinesterase inhibiting pesticides. The level of cholinesterase depression reported dictates the employer's response.

To encourage participation in cholinesterase monitoring, L&I has held numerous outreach and training workshops on the monitoring rule for grower and medical provider communities throughout the state.

Cholinesterase Monitoring Results

Based on the Scientific Advisory Committee for Cholinesterase Monitoring final report, *Cholinesterase Monitoring of Pesticide Handlers in Agriculture: 2004 – 2006*, in 2006:

Two hundred forty four employers had their employees participate in baseline testing, a 31 percent decrease from 2005 and a 34 percent decrease from 2004. The largest number of participants from one employer was 148, the median was four per employer, and the mean was 7.7 handlers per employer. (See Table 39 for baseline and periodic test numbers by employer size and by year.)

- 1889 employees participated in the program, a 17 percent decrease from 2005 and a 29 percent decrease from 2004. Each enrolled worker had a baseline test.
- 471 (25%) of these workers reached the pesticide-handling hour threshold of 30 hours in 30 consecutive days and received subsequent periodic testing.
- 57 (11%) of the participants with periodic tests had at least one cholinesterase depression of more than 20 percent from baseline. Depressions in these 57 workers triggered their employers to perform a workplace evaluation and generated alerts to L&I.

- Seven of these alerts were issued to workers with cholinesterase depressions requiring removal from further exposures to cholinesterase inhibiting pesticides (depressions greater than or equal to 30 percent for RBC and 40 percent for serum). Four of these workers had depressions triggering workplace evaluations, continued to work, and had subsequent periodic tests with depressions severe enough to trigger removal from pesticide exposure.
- In 2006, L&I offered work place evaluations and consultations to employers with employees whose cholinesterase levels were depressed to the workplace evaluation or exposure removal levels. Compliance inspections were triggered by multiple depressions with the same employer.

Table 39. Baseline and Periodic Testing for Cholinesterase Monitoring Participants by # of Handlers per Employer, 2006

Number Handlers per Employer	Number Employers Total	Number of Employees with Base lines	Number and Percent Handlers with at Least One Periodic Test	Number and Percent Handlers with at Least One Depression
> 50	5	463	129 (28%)	11 (9%)
11 - 49	37	747	189 (25%)	32 (17%)*
1 – 10	202	679	154 (23%)	14 (9%)
Total 2006	244	1889	471 (25%)	57 (12%)
Total 2005	312	2263	611 (27%)	59 (10%)
Total 2004	370	2655	580 (22%)	119 (21%)

** Eight of these participants worked for a single employer. This is the largest number of employees with significant ChE depression from a single employer.*

To assess declinations and numbers of eligible handlers who are opting out of participation, L&I surveyed five health care clinics that performed about 75 percent of the total baseline cholinesterase tests in 2005. These health care clinics estimated the proportion of eligible handlers who were referred to the clinic but declined baseline testing. All clinics had declination estimates less than the 15 percent declination rate anticipated in the 2003 Cholinesterase Monitoring Small Business Economic Impact Statement. The total number of participants went down each year, but the rate for persons getting follow-up testing fluctuated. In an effort to determine the most likely causes for the decrease in participants from 2004 to 2006, L&I investigated about 25 percent of employers who ceased participating in ChE monitoring between the second and third years. These investigations provided evidence for the first three reasons presented below.

Factors that might have contributed to a decrease in participating employers in 2006 include:

- Changes in pesticide use patterns, including eliminating the use of covered pesticides or applying less of the covered pesticide;
- Lessening handler exposure below the 30-hour time period for mandatory testing through handler rotation or an increase in the number of pesticide applicators;

- Increased handling of pesticides by those not covered under the rule (e.g., owner administration of covered pesticides)
- Employer non-compliance or handlers refusing to participate.

Health care providers sent a report of the number of hours a worker handled cholinesterase-inhibiting pesticides to the DOH Public Health Laboratory with the worker's periodic test. DOH forwarded the handling hours information to L&I.

From 2004 through 2006, on average, serum cholinesterase was shown to be depressed by 6.8 percent in periodically tested handlers. Red blood cell (RBC) enzyme activity has shown less frequent or extensive depression. Consistent with these observations are the results from analyses of handlers with pre-baseline testing exposures to insecticides (i.e., working baselines). That subset of handlers also tended to have lower ChE levels in their baseline tests than handlers without pre-baseline exposures.

Regardless of the lack of a strong correlation between hours worked and serum ChE depression, the consistency of observations for average population depressions suggest that exposures sufficient to depress at least serum ChE activity had occurred in a number of handlers. A small but significant relationship was found for serum cholinesterase. On average, a 0.053 percent serum cholinesterase depression could be expected for every hour spent handling category I or II organophosphate or N-methyl carbamate pesticides. This equates to an approximate 1.5 percent serum cholinesterase depression for every 30 hours spent handling in the 30 days prior to testing, a small decrease.

If L&I finds that a worker experienced symptoms that could be associated with cholinesterase depression, the case is referred to DOH for investigation. L&I referred two cases to DOH during 2005. After investigation, DOH determined that neither of the illnesses was associated with organophosphate or N-methyl carbamate exposure.

During 2004 and 2006, L&I conducted confidential consultations with employers to evaluate workplaces where employees had cholinesterase depressions compared to their baseline tests. Because these consultations are confidential, they are not included in this report. During 2005, L&I also conducted research investigations with employers to evaluate workplaces where employees had cholinesterase depressions compared to their baseline tests.

Preliminary results of cholinesterase monitoring for 2005 and 2006 were compared to results from 2004. Improvements in the 2005 cholinesterase monitoring program that were maintained in 2006 included: 1) faster laboratory turnaround of baseline tests (from 24 days to one or two days), 2) faster L&I notifications of depressions (from seven days to three days), and 3) decreased amount of time between notice of depression and initiation of an investigation (from 35 days to nine days).

More information on the cholinesterase monitoring rule is available at the L&I cholinesterase monitoring Web site:
http://www.lni.wa.gov/Safety/Topics/AtoZ/Cholinesterase/default.asp.

The Scientific Advisory Committee's report on *Cholinesterase Monitoring of Pesticide Handlers in Agriculture: 2004 - 2006* is available online at: http://www.lni.wa.gov/Safety/Topi/AtoZ/Cholinesterase/files/2004-06ChESACreport.pdf.

L&I's report to the legislature year 2004 of cholinesterase monitoring can be found at: http://www.lni.wa.gov/Safety/Topics/AtoZ/Cholinesterase/files/ChELegRpt2004Final.pdf.

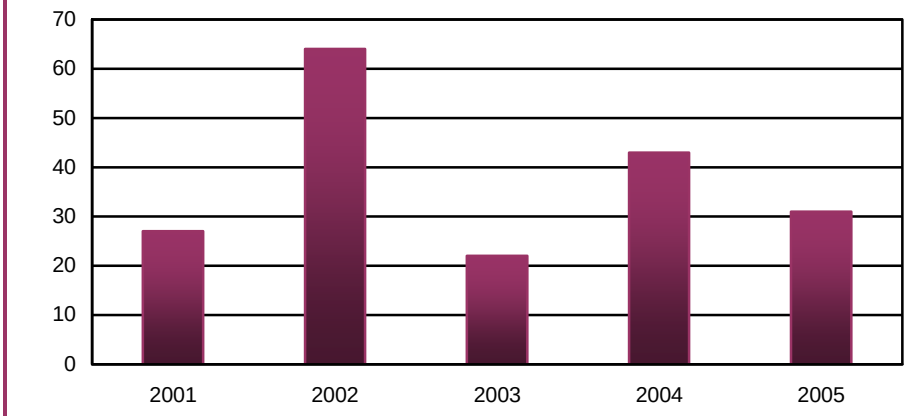
Division of Occupational Safety and Health (DOSH)

Other DOSH Activities

To enforce safety and health in the workplace, L&I DOSH staff members may issue citations requiring employers to implement changes in the workplace. Washington Industrial Safety and Health Act (WISHA) citations can be categorized as "serious" or "general." A serious violation presents a "substantial probability that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations or processes which have been adopted or are in use, in the workplace..." A general violation is a situation where the "most serious injury, illness or disease that would be likely to result from a hazardous condition cannot be reasonably predicted to cause death or serious physical harm to exposed employees, but does have a direct and immediate relationship to their safety and health." Both categories of citations require employers to implement changes in the workplace. Serious violations have penalties assigned and follow-up inspections may be performed to assure compliance. If required changes in workplace safety and health have not been made, citations are reissued as 'failure to abate' the hazard with additional monetary penalties.

This section summarizes results of pesticide-related safety and health inspections conducted by L&I DOSH. A description of each of the inspections is provided in Appendix C. The number of pesticide-related inspections decreased in 2005 (Figure 21). Of 31 total inspections, 24 (77%) were located in eastern Washington and seven were located in western Washington.

Figure 21. DOSH Workplace Safety and Health Inspections, 2001 – 2005



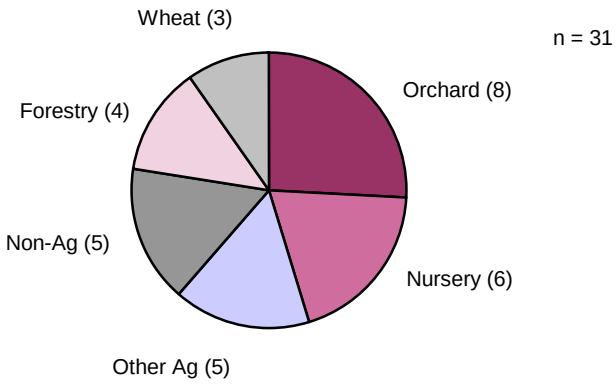
DOSH Inspections

The decrease in the number of DOSH pesticide-related inspections in 2005 was partly due to discontinuation of the 2004 L&I program that targeted workplaces covered by the Cholinesterase Rule during 2005.

Of 31 pesticide-related DOSH inspections in 2005, eight were referrals from state agencies, health care providers and others. An additional eight inspections were initiated in response to employee or employee representative complaints. Twelve were programmed inspections identified through the scheduling list and three were follow-up inspections.

Twenty-six of the 2005 inspections occurred in agricultural environments, and five were in non-agricultural settings (see Figure 22). Eight (27%) of the inspections involved orchards. The “Other Agricultural” workplace classification included two berry farms, two cattle ranches or dairies and one vegetable/melon farm. Of five non-agricultural inspections, two involved transportation of pesticides, one was at a county auditor’s office, one was a lawn and garden service, and one was a catalogue and mail order provider whose shipping containers had been fumigated.

Figure 22. DOSH Pesticide-Related Inspections by Type of Workplace, 2005



DOSH Inspections Involving Violations

L&I DOSH issues “general” and “serious” violations involving pesticides. In 2005, L&I issued citations to the employer in 26 inspections. Several inspections resulted in both serious and general citations, and one inspection generated failure to abate citations with monetary penalties of $3,850. Monetary penalties totaling $8,800 were assessed for three “failure to abate” and 18 serious pesticide-related citations from nine inspections. Sixty-eight general pesticide-related citations with no penalties were issued in 17 of the 31 inspections. No citations were issued to the employer in five inspections.

The following is an example of a DOSH inspection involving violations:

> *Employees were mixing and applying pesticides including Captan 50 W, Actellic SE, Systec 1988, Truban 25 EC, Terraclor 75, and Thiram. After inspection, nine citations were issued to the employer for the following violations. Fines for the serious citations totaled $200.00. The general citations did not involve monetary penalties.*
>
> 1) No eyewash capable of delivering at least 1.5 liters (0.4 gallons) of water per minute for fifteen minutes was available at the pesticide mixing and loading or handler decontamination sites although the label requires protective eyewear because of the potential for eye injury.
>
> 2) Employees had not received effective chemical hazard communication training on how to detect releases, the effects of over-exposure, etc.
>
> 3) Employees had not had pesticide handler training in the last five years.
>
> 4) The written respirator program was deficient.
>
> 5) Required information was not provided to voluntary respirator users.
>
> 6) Medical evaluations were not performed before determining an employee's fitness to wear respirators.
>
> 7) Annual fit-tests were not performed for employees required to wear respirators.
>
> 8) Employees with beards were wearing respirators.
>
> 9) The respirator storage did not protect the respirators from damage.

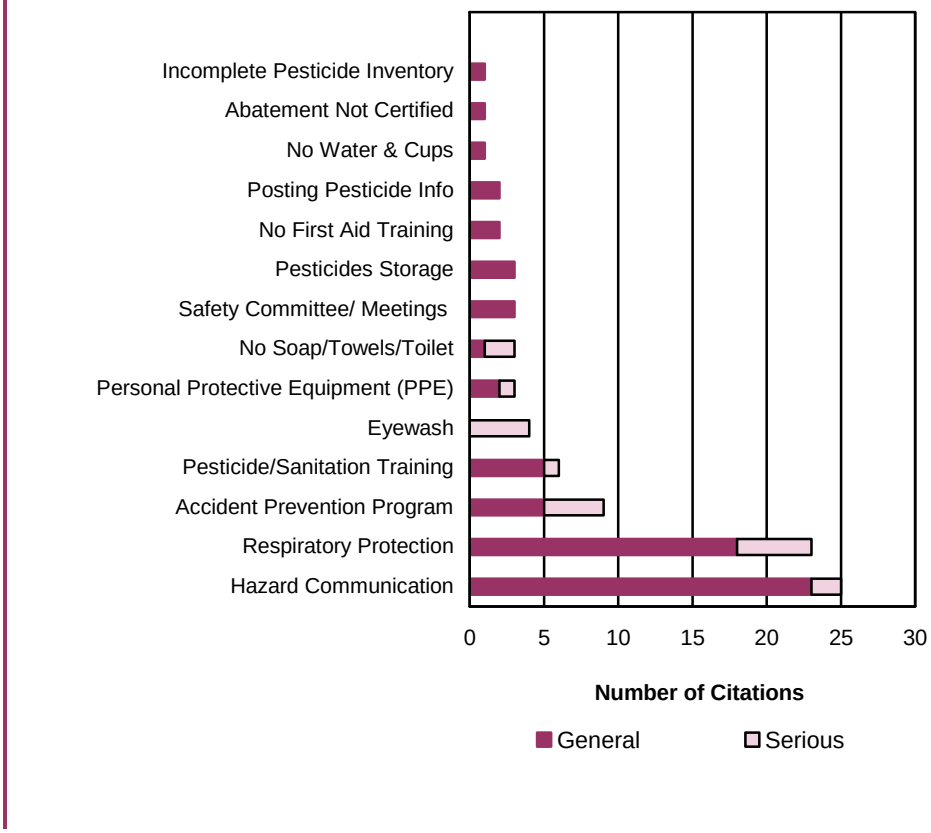
The most frequent type of serious (18) and general (66) WISHA violations cited in 2005 were:

- Respirator deficiencies, including no respirator program, improper storage or cleaning of respirators, no medical evaluations of worker's ability to wear a respirator, no respirator fit-testing
- Hazard communication deficiencies in safety programs, including missing written programs, chemical inventories, or MSDS, no employee training and insufficient chemical labeling
- Accident Prevention Program deficiencies
- Employees not trained about pesticides and their hazards or about field sanitation
- No eyewash provided
- Deficiencies in appropriate personal protective equipment
- No hand-washing facilities, no toilet
- No required safety committee or safety meetings
- Pesticides improperly stored, or stored with food, clothes or PPE
- No orientation on field sanitation

- Not posting safety, emergency or pesticide spray information as required
- No water or no single-use cups provided
- Abatement of previously cited hazards not certified
- Incomplete pesticide inventory

General and serious violations involving pesticides are categorized by type of violation in Figure 23.

Figure 23. WISHA General and Serious Violations Involving Pesticides, 2005



L&I Claims Insurance Services Division, Claims Administration Program

The Insurance Services Division, Claims Administration Program processes workers' compensation claims initiated by on-the-job injuries and illnesses. In 2005, the Claims Administration Program received 93 claims where the injury or illness initially appeared to be related to pesticide exposure (Table 40). The number of pesticide-related claims in 2005 decreased from 2004 by eight percent.

L&I accepts or rejects a claim based on whether a work-related injury or illness is diagnosed. Compensation is determined in accordance with the following definitions:

- Medical Only/Non-Compensable Claim: A worker experienced symptoms that he/she believes occurred from exposure on-the-job and seeks medical evaluation. The physician finds the symptoms related to the exposure and there is objective evidence of injury. Therefore, the claim is allowed and medical evaluation and any follow-up medical care/treatment costs are paid. The employee misses less than three days of work. These lost workdays are not reimbursed to the employee.
- Time Loss/Compensable Claim: A worker has an allowable claim and misses more than three days of work immediately following an exposure on the job. The worker is paid a portion of salary while unable to work. All related medical costs are covered.
- Rejected Claims: Initial diagnostic and medical evaluation costs are covered but the claim is rejected because objective evidence is lacking to relate symptoms to the workplace exposure. Claims may be rejected because symptoms have resolved by the time treatment is obtained, there is no objective evidence of injury, the worker may not yet have symptoms of illness from the exposure, or exposure cannot be confirmed or documented. A rejected status can be appealed and is often reevaluated, but, once final, the worker can no longer reopen a claim based on original symptoms. Illness claims may be either opened or reopened up to two years after the identification of the onset of delayed symptoms. Costs of initial medical visits are usually paid.
- Pending: Additional information is being collected on the claim before a determination can be made.
- Kept on Salary: The employer elects to pay the claimant's salary instead of L&I paying time loss payments while the employee is recovering from an injury or illness.

Table 40. Status of L&I Claims Initially Related to Pesticides, 2001 – 2005

	2001	2002	2003	2004	2005
Medical Only Non-compensable	75	79	83	70	62
Time Loss/ Compensable	8	4	4	4	2
Rejected	45	26	45	26	29
Pending/Unknown	-	-	1	1	-
Kept on Salary	1	-	-	-	-
Total	***129***	***109***	***133***	***101***	***93***

Claims categorized as *Medical Only* and *Time Loss* are compensated as work-related injuries. Of the 93 claims in 2005, 62 (66.7%) were compensated by L&I as being work related injuries. L&I paid either time-loss or medical benefits for a total of $56,514.66. This figure includes costs of first visits and time lost on two cases. In 2005, there were slightly fewer claims than in each of the previous five years.

As noted in the Rejected Claims definition above, most rejected claims were compensated for initial diagnostic and medical evaluations costs even if a determination could not be made to relate the symptoms to the work place.

L&I Claims Reported to Department of Health

L&I refers claims involving pesticides to Department of Health (DOH) to investigate whether the illness is pesticide-related. A claim that is initially reported as pesticide-related could be accepted by L&I as work-related, then DOH could investigate and classify it as unrelated to pesticide exposure.

L&I referred 93 claims to DOH to investigate during 2005 (Table 41). L&I assessed 64 of the 93 claims as work-related. Of the 64 claims that L&I assessed as valid work related injuries, DOH classified 45 (70%) as definitely, probably, or possibly related to pesticides (DPP). Based on DOH criteria, the other 19 were classified as insufficient evidence to assess the link with pesticides, suspicious, or unlikely to be related to pesticide exposure. Of the 29 claims that L&I rejected, DOH classified 17 as likely to be associated with pesticide exposure (DPP).

Table 41 illustrates the difference in evaluation criteria and perspective between the two agencies.

Table 41. Comparison of L&I Claims and DOH Classification Status, 2005

L&I Claim Determination	DOH Classification						
	Definite	Probable	Possible	Not Enough Info	Suspicious	Unlikely	Total
Medical Only/ Non-compensable	15	16	12	16	2	1	62
Time Loss/ Compensable	--	1	1	--	--	--	2
Rejected	1	5	11	8	2	2	29
Pending/Unknown	--	--	--	--	--	--	0
Kept on Salary	--	--	--	--	--	--	0
Total	***16***	***22***	***24***	***24***	***4***	***3***	***93***

Sixty-five of the 93 claims L&I referred to DOH for evaluation were agricultural. DOH classified 41 of the 65 claims as DPP related to pesticide exposure. Of the 41 DPP agricultural workers, 32 claims involved workers in the tree fruit industry, three involved the potato industry, and three were in nurseries or greenhouses.

> *Agricultural case: A 47- year-old male mechanic in Benton County was drifted upon by an aerial application while fixing/welding a water pump in a potato circle. Another worker avoided exposure by staying inside of the truck.*
>
> *Non-agricultural case: A 31-year- old King County female office worker went into the office restroom immediately after it was treated for gnats. There was no placard posted. She developed upper respiratory symptoms within two to four minutes. She went to an ER where she was evaluated, treated, and released. The need to post a notification after pesticide applications and Pest Control Operator timing was discussed with human resources.*

The individuals in the 29 DPP non-agricultural cases worked in a variety of professions, including landscaping, construction, pest control, maintenance, parks, and others. Occupational exposures are described in detail in the DOH Section under Occupational Cases of Pesticide-Related Illness.

Washington Poison Center

Washington Poison Center's summary of phone calls received concerning human exposure to pesticides during 2005.

Background

Washington Poison Center (WPC) provides 24-hour emergency medical assistance, information, and education about toxic substances or suspected poisons by way of a toll-free telephone number. Pesticide-related calls to WPC include intentional and unintentional human exposures, confirmed and non-confirmed exposures, and requests for information only. WPC also receives calls concerning rodenticides, animal exposures, and other pesticide issues.

Human Exposure Calls

In 2005, WPC received 2,430 calls concerning human exposures to pesticides. The percentage of pesticide-related human exposure calls relative to the total number of human exposure calls received by WPC increased slightly in the past two years (Table 42).

Table 42. WPC Human Exposure to Pesticide Calls, 2001– 2005

Pesticide	2001	2002	2003	2004	2005
Fungicide	94	64	53	56	76
Herbicide	404	347	368	422	457
Fumigant	4	9	10	7	6
Insecticide	1,128	1,110	1,016	1,302	1,347
Insect repellent	89	96	156	155	137
Animal repellent	1	3	5	17	16
Moth repellent	53	40	30	39	35
Rodenticide	398	374	299	344	356
Total*	***2,171***	***2,043***	***1,937***	***2,342***	***2,430***
Percent of Total Human Exposure Calls	3%	2.9%	2.9%	3.5%	3.6%
Total WPC Human Exposure Calls*	***71,675***	***70,298***	***65,857***	***67,517***	***67,986***

** Includes human exposure calls that may or may not involve illness.*
*** Does **not** include information-only calls (no identifiable patient) or confirmed non-exposures.*

WPC classifies a call as a *Human Exposure* when a caller reports that they or someone else inhaled, ingested, injected, or inserted a pesticide, or got a pesticide on their skin or in their eyes. Human exposure calls also include situations where the caller only suspects that there was an exposure to a pesticide. Most human exposure calls do not involve associated symptoms. Additional information about severity of human exposures is provided below. Calls to obtain pesticide information only are classified as 'No Identifiable Patient' and are not considered exposures. For example, a call to find out if using a pyrethrin-based ant killer in the home would be a risk to small children living there is classified as "No Identifiable Patient."

Between 2000 and 2003, the total number of calls to WPC regarding all human chemical exposures, including pesticides, decreased here as well as in other areas throughout the Pacific Northwest. In 2004 and 2005, however, the number of human exposure calls increased slightly (Table 42).

WPC Human Exposure Calls Reported to Department of Health

By Washington State law, health care providers are required to report pesticide poisoning to the Department of Health (DOH) (WAC 246-100-101). Health care providers may report cases by calling the WPC, who helps manage the case, then forwards information to DOH.

In 2004, WPC collaborated with DOH and the University of Washington Clinical Informatics Research Group to develop a system for automated selection of WPC call records that meet DOH reporting criteria. Using the University of Washington extraction routine and a secure file transfer mechanism, files with all pertinent reports are now automatically sent from WPC's Toxicall data system to DOH's Pesticide Program every 24 hours. DOH Pesticide Program staff then use a record review system, the Pesticide Illness Electronic Reporting System, to upload and view reports from WPC.

DOH reviews reports of suspected pesticide illness incidents and conducts preliminary interviews to determine if incidents should be investigated. An incident is investigated if all of the following conditions apply:

- a pesticide exposure is reported
- symptoms are reported
- the pesticide exposure occurred during the last three months
- the pesticide exposure occurred in Washington State
- the pesticide exposure was not an intentional suicide gesture
- the person sought care from a professional health care provider.

An incident may involve multiple cases (persons) who experience pesticide illness.

By 2005, the electronic reporting system between WPC and DOH was fully implemented. Using this system, DOH reviewed all human pesticide-related illness calls to WPC and identified 130 calls for investigation. After investigation, DOH determined that 100 of the 130 calls involved illnesses definitely (33), probably (11), or possibly (56) related to the pesticide exposure (Table 43). These 100 illnesses are included in the detailed analyses of definite, probable, and possible cases in the DOH Section of this report.

During the transition to electronic reporting (December 1, 2004 through March 31, 2005), DOH conducted analyses on 55 WPC calls where the person did not seek medical care. These analyses are on page 65 in the DOH Section.

Table 43. Pesticide-related Calls to WPC Investigated by DOH, 2001 – 2005

Year	Investigated by DOH	DOH DPP (%)*
2001	68	30 (44%)
2002	106	73 (69%)
2003	122	88 (72%)
2004	150	128 (85%)
2005	130	100 (77%)

** Percentage of cases investigated by DOH classified as definitely, probably or possibly related to the pesticide exposure.*

Of the 100 WPC calls that DOH determined to be illnesses definitely, probably or possibly related to pesticides in 2005, 68 involved residential exposures, 13 involved agricultural exposures, and 17 occurred in other public settings. Two exposure sites were unknown.

In 2005, there were 14 WPC calls involving children under the age of 19 that DOH determined were definitely, probably or possibly related to the pesticide exposure. Of these:

- Three children were sprayed with aerosol pesticides either by themselves or another child.
- Two children got lice shampoo in their eyes.
- Two children ingested the product (roach powder or flea shampoo).
- Three children had symptoms from breathing in smoke (two were from burning pesticide containers; one was from a gopher bomb).
- One teen retail worker was exposed to a damaged box of pesticides.

The following case examples describe two incidents where children inappropriately or accidentally released pesticide products themselves.

> *A 10-year-old boy and his friend were playing video games at his friend's home. His friend sprayed an aerosol insect repellent and an aerosol deodorant in the game room. The boys continued to play in the room for three hours. The 10-year-old boy developed blurry vision and a cough, went home, showered, and changed clothes. The next day his mother took him to a health clinic where the attending nurse called WPC.*
>
> *A 3-year-old girl found an aerosol insect repellent in a diaper bag while in a shopping cart at a grocery store. She sprayed herself in the eye. Her mother immediately flushed the child's eyes at the store eye wash station and then took her to a clinic where the child's eyes were flushed again. The health clinic called WPC for information.*

Type of Pesticides Involved in WPC Human Exposure Calls

As in the past, more than half of the human exposure calls involved insecticides. Table 44 illustrates WPC exposure calls by pesticide type for different age groups for 2005. Of all pesticide calls, 1,347 (55%) were about insecticides.

In 2005, WPC received 457 calls about potential herbicide exposures, representing 19 percent of the 2,430 pesticide calls (Table 40). One hundred twenty four (27%) of herbicide calls involved 2,4-D or other chlorophenoxy herbicides (i.e., MCPA, MCPP, and 2,4,5-T) and 142 (31%) involved exposure to glyphosate (the active ingredient in Round-up).

Table 44. WPC Pesticide-Related Exposures By Age of Case, 2005

Pesticide Type	<6 Years	6-19 Years	>19 Years	Unknown Age	Total Calls
Fungicide	18	8	43	7	76
Herbicide	100	60	293	4	457
Fumigant	0	2	4	0	6
Insecticide	405	155	766	21	1,347
Animal repellent	6	1	9	0	16
Insect repellent	81	30	26	0	137
Moth repellent	16	2	17	0	35
Rodenticide	248	20	87	1	356
Totals	***874***	***278***	***1,245***	***33***	***2,430***

Table 45 lists the types of insecticides involved in human exposure calls to WPC for 2001 through 2005. Because the product involved in an incident frequently involves more than one type of pesticide, the totals over-represent the number of people exposed.

Table 45. WPC Type of Insecticide Involved in Human Exposure Calls, 2001 – 2005

Generic description	2001	2002	2003	2004	2005
Arsenic	3	6	8	5	5
Borates/Boric Acid	20	33	22	29	49
Carbamate only	35	46	37	60	47
Carbamate with other pesticides	6	9	19	27	23
Chlorinated hydrocarbon only	48	29	26	20	20
Chlorinated hydrocarbon with other insecticide	2	4	3	4	14
Metaldehyde	26	31	22	36	56
Organophosphate only	209	198	124	137	130
Organophosphate with carbamate	3	4	0	1	3
Organophosphate with chlorinated hydrocarbons	4	1	0	0	0
Organophosphate with other pesticide	26	36	28	45	26
Organophosphate/Carbamate/Chlorinated hydrocarbons	0	1	0	0	0
Piperonyl butoxide/Pyrethrins/Pyrethroids	432	418	405	529	542
Repellents (Insect)	89	96	156	155	137
Rotenone	1	2	1	3	1
Veterinary insecticide	74	6	6	11	12
Other	114	155	181	266	282
Unknown	123	128	128	124	135
Total	***1,217***	***1,203***	***1,166***	***1,452***	***1,482***

In 2005, 229 (15%) of the insecticide-related calls involved organophosphates (159) and carbamates (70).

Severity of Human Exposures to Pesticides

WPC classifies human exposure calls by severity of medical outcome. Definitions used by WPC to define severity are listed below:

Minor Effect	Symptoms are minimally bothersome and resolve rapidly (e.g., skin irritation, first-degree skin burn, transient cough, mild systemic symptoms such as nausea or headache).
Moderate Effect	Symptoms are more pronounced, more prolonged or more systemic in nature. Usually some form of medical treatment is indicated (e.g., corneal abrasion, disorientation, pronounced wheezing, brief seizures that respond readily to treatment).
Major Effect	Symptoms are life-threatening or result in significant residual disability. Medical treatment is required (e.g., repeated seizures, acute cholinergic crisis, respiratory compromise requiring intubation).

WPC follows up on calls by calling back to the home, workplace, or health care facility for exposures where there are moderate or major effects present at the time of the call or there is a high potential for moderate or major symptoms to develop based on the history given by the caller or an evaluation of the substance.

The number of WPC exposures with medical outcomes does not match the number of pesticide-related calls investigated by DOH because of differences in agency classification criteria. DOH primarily investigates WPC referrals where medical care was sought. Table 46 shows the disposition of WPC calls by medical outcome.

In 2005, 52 (2%) pesticide-related human exposure calls involved moderate or major health effects.

Fifty (2%) pesticide-related calls involved intentional exposure.

Table 46. WPC Human Exposure Calls by Medical Outcome/Disposition*, 2005

Follow-up	
No health effect	78
Minor health effect/outcome	167
Moderate health effect/outcome	49
Major health effect/outcome	3
Death (probable suicide)	1
No Follow-up	
Nontoxic exposure	258
Minimal toxicity expected	1,589
Potentially toxic exposure**	37
Unrelated	248
Total (follow-up and no follow-up)	***2,430***

** Cases coded as 'confirmed non-exposure' are not included.*
*** Cases where the caller either refused to provide a name or contact information or there are other circumstances that did not allow follow-up.*

Appendix A
Pesticide Incident Reporting and Tracking (PIRT) Review Panel

Pesticide Health Hazards RCW 70.104.070-090

2006 PIRT Panel Representatives

Pesticide Incident Definition

Primary Agency Responsibilities Related to Pesticides Exposure

Agency Response Time Mandates

Pesticides - Health Hazards RCW 70.104.070-090

RCW 70.104.070 Pesticide incident reporting and tracking review panel -- Intent. The legislature finds that heightened concern regarding health and environmental impacts from pesticide use and misuse has resulted in an increased demand for full-scale health investigations, assessment of resource damages, and health effects information. Increased reporting, comprehensive unbiased investigation capability, and enhanced community education efforts are required to maintain this state's responsibilities to provide for public health and safety.

It is the intent of the legislature that the various state agencies responsible for pesticide regulation coordinate their activities in a timely manner to ensure adequate monitoring of pesticide use and protection of workers and the public from the effects of pesticide misuse.

[1989 c 380 § 67.]

Severability -- 1989 c 380: See RCW 15.58.942.

RCW 70.104.080 Pesticide panel -- Generally.

(1) There is hereby created a pesticide incident reporting and tracking review panel consisting of the following members:

(a) The directors, secretaries, or designees of the departments of labor and industries, agriculture, natural resources, fish and wildlife, and ecology;

(b) The secretary of the department of health or his or her designee, who shall serve as the coordinating agency for the review panel;

(c) The chair of the department of environmental health of the University of Washington, or his or her designee;

(d) The pesticide coordinator and specialist of the cooperative extension at Washington State University or his or her designee;

(e) A representative of the Washington poison control center network;

(f) A practicing toxicologist and a member of the general public, who shall each be appointed by the governor for terms of two years and may be appointed for a maximum of four terms at the discretion of the governor. The governor may remove either member prior to the expiration of his or her term of appointment for cause. Upon the death, resignation, or removal for cause of a member of the review panel, the governor shall fill such vacancy, within thirty days of its creation, for the remainder of the term in the manner herein prescribed for appointment to the review panel.

(2) The review panel shall be chaired by the secretary of the department of health, or the secretary's designee. The members of the review panel shall meet at least monthly at a time and place specified by the chair, or at the call of a majority of the review panel.

[1994 c 264 § 41; 1991 c 3 § 363; 1989 c 380 § 68.]

Severability -- 1989 c 380: See RCW 15.58.942.

RCW 70.104.090 Pesticide panel -- Responsibilities. The responsibilities of the review panel shall include, but not be limited to:

(1) Establishing guidelines for centralizing the receipt of information relating to actual or alleged health and environmental incidents involving pesticides;

(2) Reviewing and making recommendations for procedures for investigation of pesticide incidents, which shall be implemented by the appropriate agency unless a written statement providing the reasons for not adopting the recommendations is provided to the review panel;

(3) Monitoring the time periods required for response to reports of pesticide incidents by the departments of agriculture, health, and labor and industries;

(4) At the request of the chair or any panel member, reviewing pesticide incidents of unusual complexity or those that cannot be resolved;

(5) Identifying inadequacies in state and/or federal law that result in insufficient protection of public health and safety, with specific attention to advising the appropriate agencies on the adequacy of pesticide reentry intervals established by the federal environmental protection agency and registered pesticide labels to protect the health and safety of farmworkers. The panel shall establish a priority list for reviewing reentry intervals, which considers the following criteria:

(a) Whether the pesticide is being widely used in labor-intensive agriculture in Washington;

(b) Whether another state has established a reentry interval for the pesticide that is longer than the existing federal reentry interval;

(c) The toxicity category of the pesticide under federal law;

(d) Whether the pesticide has been identified by a federal or state agency or through a scientific review as presenting a risk of cancer, birth defects, genetic damage, neurological effects, blood disorders, sterility, menstrual dysfunction, organ damage, or other chronic or subchronic effects; and

(e) Whether reports or complaints of ill effects from the pesticide have been filed following worker entry into fields to which the pesticide has been applied; and

(6) Reviewing and approving an annual report prepared by the department of health to the governor, agency heads, and members of the legislature, with the same available to the public. The report shall include, at a minimum:

(a) A summary of the year's activities;

(b) A synopsis of the cases reviewed;

(c) A separate descriptive listing of each case in which adverse health or environmental effects due to pesticides were found to occur;

(d) A tabulation of the data from each case;

(e) An assessment of the effects of pesticide exposure in the workplace;

(f) The identification of trends, issues, and needs; and

(g) Any recommendations for improved pesticide use practices.

[1991 c 3 § 364; 1989 c 380 § 69.]

Effective date -- 1989 c 380 §§ 69, 71-73: "Sections 69 and 71 through 73 of this act shall take effect on January 1, 1990." [1989 c 380 § 90.]

Severability -- 1989 c 380: See RCW 15.58.942.

2005 and 2006 PIRT Panel Representatives

Department of Health (Chair)	Marianne Guichard, Rob Duff
Department of Agriculture	Ann Wick
Department of Ecology	Maria Victoria Peeler
Department of Fish and Wildlife	Vacant
Department of Labor and Industries	Gabrielle Toutonghi, Pam Edwards
Department of Natural Resources	Karen Ripley
General Public	Alice C. Larson, PhD
Practicing Toxicologist	Steven Gilbert, PhD, DABT
University of Washington	Matthew Keifer, MD, MPH
Washington Poison Center	William O. Robertson, MD
Washington State University	Allan Felsot, PhD

2005 and 2006 PIRT Panel Coordinators

Department of Health	Lucy Harter, Fran McBride

Pesticide Incident Definition

A pesticide incident includes:

- Documented or suspected human cases of pesticide poisoning reported by health care providers as stated in WAC 246-100.
- Suspected pesticide poisoning of animals that may relate to human illness.
- Cases of human exposure where there is concern, but no medical evidence to substantiate a pesticide poisoning.
- Emergencies relating to pesticides that represent an imminent and/or future hazard to the public and/or labor force due to the toxicity of the material, the quantities involved, or the environment in which the incident occurs.
- Documented impacts to the environment including ground, surface water or soil contamination, crop or other resource damage due to the use or misuse of pesticides.
- Violations of worker protection related to pesticide use.
- Property loss or damage from the use or application of any pesticide.

A pesticide incident appropriate for review by the PIRT Panel includes a case or situation where information received by Departments such as Agriculture, Health, or Labor and Industries indicates that the use of a pesticide may be related to a current or future threat to the public health and welfare.

A pesticide incident appropriate for resolution by the PIRT Panel is any case described above for which unresolved issues remain after agencies have conducted investigations. Incidents concerning human health are given top priority.

Adopted April 19, 1990

Primary Agency Responsibilities Related to Pesticide Exposure

Washington State Department of Agriculture

The Washington State Department of Agriculture (WSDA) is responsible for protection of health, welfare, and the environment under authority of the Pesticide Control Act and the Pesticide Application Act. These laws give the department the authority to regulate the handling, transportation, storage, distribution, use, and disposal of pesticides and their containers. WSDA administers the Federal Insecticide, Fungicide, and Rodenticide Act and the state pesticide laws. In administering these programs, WSDA

- Adopts and administers pesticide regulations including state pesticide registration;
- Tests and certifies pesticide applicators;
- Administers continuing education requirements for pesticide applicators; and,
- Investigates complaints of pesticide misuse or misapplication.

Washington State Department of Health

The Washington State Department of Health (DOH) is responsible for carrying out rules and regulations adopted by the State Board of Health for the purposes of protecting and enhancing public health and welfare. This includes the determination and documentation of health effects resulting from pesticide poisonings and exposures, and delineation of public health risks. The major elements of DOH Pesticide and Surveillance Section are set forth in RCW 70.104.030 and include:

- Conduct medical investigations of suspected human pesticide poisonings and those animal poisonings that may relate to human illness.
- Provide technical assistance regarding health effects and risks of pesticides to health care providers, other agencies, and individuals.
- Provide community information regarding health effects of pesticide exposure.
- Secure and provide for analysis of environmental samples or human and animal tissues to determine the nature and cause of any suspect case of pesticide poisoning.
- Establish, chair, and staff the multi-agency Pesticide Incident Reporting and Tracking Review Panel (PIRT).
- Establish pesticide illness/exposure reporting mechanisms to be used by health care providers.
- Develop a program of medical education for physicians and other health care providers regarding pesticide poisonings.

Washington State Department of Ecology

The Washington State Department of Ecology (Ecology) is responsible for protection of public health and the environment, particularly under these jurisdictions: Chapter 90.48 RCW, Water Pollution Control Act; Hazardous Waste Management Act; Chapter 70.105D RCW, Model Toxics Control Act; and, Chapter 70.94 RCW, Washington Clean Air Act. The following elements apply to pesticide incidents.

- Protect wetlands, shorelands, and water including control and prevention of pollution from pesticide activities.
- Implement an aquatic pesticide application permit system.
- Administer a regulatory and education program directed at proper management and disposal of pesticide wastes.
- Investigate and enforce remediation of incidents involving spills or environmental contamination by pesticides.
- Provide educational and technical assistance to make voluntary compliance with environmental laws easier.

Washington State Department of Labor and Industries

The Washington State Department of Labor and Industries (L&I), the Division of Industrial Safety and Health, administers the Washington Industrial Safety and Health Act of 1973, Chapter 49.17 RCW. L&I has primary responsibility for ensuring that employers provide safe and healthful working conditions for every worker in Washington State at a level which is at least as effective as the Federal Occupational Safety and Health Act of 1970. In administering Chapter 49.17 RCW, L&I:

- Conducts safety and health workplace inspections in agriculture and industry;
- Promulgates workplace safety and health standards;
- Investigates employee complaints;
- Provides employers information and consultation; and,
- Conducts training and education programs.

L&I also focuses on hazardous chemicals through administration of the Worker Right to Know Law, Chapter 49.70 RCW, and administers the Workers Compensation Program, Title 51 RCW, through the Division of Industrial Insurance.

Washington State Department of Natural Resources

The Washington State Department of Natural Resources administers the Forest Practices Rules and Regulations, WAC 222. Section 38 of WAC 222 pertains to forest chemicals including pesticides and fertilizers. These regulations are written to protect timber resources, fish, and wildlife from the misuse or misapplication of

forest chemicals. The elements of the program that apply to pesticides involve issuing permits for pesticide applications in forests and monitoring permit restrictions.

Agency Response Time Mandates

Washington State Department of Agriculture

WAC 16-228-233 directs the Washington State Department of Agriculture to respond to complaints involving humans or animals immediately. All other complaint investigations must be initiated within 48 hours.

Washington State Department of Health

WAC 246-100-217 directs the Washington State Department of Health (DOH) to respond to incidents within time periods based on severity. In the event of a pesticide-related hospital admission, death, or a threat to public health, DOH must respond within 24 hours. For all other cases, DOH must respond within 48 hours after notification.

Washington State Labor and Industries

The Washington State Department of Labor and Industries (L&I) response times are mandated in the Federal Occupational Safety and Health Act operations manual. Serious complaints require response within 30 days; all others within 120 days. The goal of the L&I Consultation and Compliance Services Division is to respond to serious complaints within 15 days; all others within 30 days. Response is defined as a site visit, not a telephone call.

Appendix B
Case and Severity Classifications

National Public Surveillance System Relationship Classifications

NIOSH Severity Classifications

Signs and Symptoms by Severity Category

National Public Surveillance System Relationship Classifications

Definite Case: 1. Laboratory clinical or environmental evidence corroborates exposure, 2. Two or more new post-exposure abnormal signs and/or test/laboratory findings are reported by a licensed health care provider, and 3. The finding documented under health effects are characteristic for the pesticide and the temporal relationship between the exposure and health effects is plausible and/or the findings are consistent with an exposure-health effect relationship based upon the known toxicology of the putative agent.

Probable Case: 1. Laboratory clinical or environmental evidence corroborates exposure, 2. Two or more post-exposure abnormal symptoms reported but do not meet the threshold of a definite, and 3. The finding documented under health effects are characteristic for the pesticide and the temporal relationship between the exposure and health effects is plausible and/or the findings are consistent with an exposure-health effect relationship based upon the known toxicology of the putative agent.

Or

1. Evidence of exposure based solely upon written or verbal report by case, witness, application, observation of residue and/or contamination by other than a trained profession or other evidence suggesting that an exposure occurred, 2. Two or more new post-exposure abnormal signs and/or test/laboratory findings are reported by a licensed health care provider, and 3. The finding documented under health effects are characteristic for the pesticide and the temporal relationship between the exposure and health effects is plausible and/or the findings are consistent with an exposure-health effect relationship based upon the known toxicology of the putative agent.

Possible Case: 1. Evidence of exposure based solely upon written or verbal report by case, witness, application, observation of residue and/or contamination by other than a trained profession or other evidence suggesting that an exposure occurred, 2. Two or more post-exposure abnormal symptoms reported but do not meet the threshold of a definite, and 3. The finding documented under health effects are characteristic for the pesticide and the temporal relationship between the exposure and health effects is plausible and/or the findings are consistent with an exposure-health effect.

Suspicious Case: 1. Laboratory clinical or environmental evidence corroborates exposure, or evidence of exposure based solely upon written or verbal report by case, witness, application, observation of residue and/or contamination by other than a trained profession or other evidence suggesting that an exposure occurred, 2. Two or more new post-exposure abnormal signs and/or test/laboratory findings are reported by a licensed health care provider or two or more post-exposure abnormal symptoms reported but do not meet the threshold of a DEFINITE, and 3. Insufficient toxicological information is available to determine causal the relationship between the exposure and health effects.

Unlikely Case: 1. Laboratory clinical or environmental evidence corroborates exposure, or evidence of exposure based solely upon written or verbal report by case, witness, application, observation of residue and/or contamination by other than a trained profession or other evidence suggesting that an exposure occurred, 2. Two or more new post-exposure abnormal signs and/or test/laboratory findings are reported by a licensed health care provider or two or more post-exposure abnormal symptoms reported but do not meet the threshold of a DEFINITE, and 3. Evidence of exposure-health effect relationship is not present due to no observed health or effect, a temporal relationship does not exist, or the constellation of health effects are not consistent based upon the known toxicology of the putative agent.

Insufficient Information: Insufficient data in the documentation of the pesticide exposure or insufficient data in the documentation of adverse health effects.

Not a Case: Strong evidence that no pesticide exposure occurred or insufficient toxicological information is available to determine causal relationship between exposure and health effects.

NIOSH Severity Classifications

Severity Index for Use in State-based Surveillance of Acute Pesticide-related Illness and Injury Descriptions of Severity Categories

04 Mild illness or injury: Low severity. Often involves skin, eye or upper respiratory irritation. May also include fever, headache, fatigue or dizziness. Typically the illness or injury resolves without treatment. There is minimal lost time (less than 3 days) from work or normal activities.

03 Moderate illness or injury: This category often involves systemic manifestations. Usually treatment is provided. The individual is able to return to normal functioning without any residual disability. Usually, less time is lost from work or normal activities (3-5 days) compared to those with severe illness or injury. No residual impairment is present although effects may be persistent.

02 Severe illness or injury: Considered life threatening and typically requires treatment. Commonly involves hospitalization to prevent death. Signs and symptoms include, but are not limited to, coma, cardiac arrest, renal failure and/or respiratory depression. The individual sustains substantial loss of time (more than 5 days) from regular work. Can include assignment to limited or light work duties or normal activities if not employed. This level may include the need for continued health care after the exposure, prolonged time off of work, and limitations or modification of work or normal activities. The individual may sustain permanent functional impairment.

01 Death: Includes a human fatality resulting from exposures to one or more pesticides.

Signs and Symptoms by Severity Category

(Modeled after Persson et. al., 1998 and includes SPIDER database elements)

ORGAN SYSTEM	SEVERITY CATEGORY AND CODE			
	FATAL	HIGH	MODERATE	LOW
	1	2	3	4
	Death	**Severe or Life-threatening Signs**	**Pronounced or Prolonged Signs or Symptoms**	**Mild, transient, and spontaneously resolving symptoms**
• Gastrointestinal • System		• Massive hemorrhage/perforation of gut	• Diarrhea (G14, **sign only**) • Melena (GI7) • Vomiting (GI6, **sign only**)	• Abdominal pain, cramping (GI1) • Anorexia (GI2) • Constipation (GI3) • Diarrhea (GI4, **symptom**) • Nausea (GI5) • Vomiting (GI6, **symptom**)
Respiratory System		• Cyanosis (RESP 2) + Respiratory depression (RESP 7) • Pulmonary edema (RESP6) • Respiratory arrest	• Abnormal pulmonary x-ray • Pleuritic chest pain/pain on deep breathing (RESP8) • Respiratory depression (RESP7) • Wheezing (RESP9) • Dyspnea, shortness of breath (RESP4, **sign only**)	• Cough (RESP1) • Upper respiratory pain, irritation (RESP3) • Dyspnea, shortness of breath (RESP4, **symptom**)
Nervous System		• Coma (NS3) • Paralysis, generalized (NS10) • Seizure (NS5, **sign only**)	• Confusion (NS4) • Hallucinations (NS99 Other) • Miosis with blurred vision (NS14) • Seizure (NS5, **symptom**) • Ataxia (NS1, **sign only**) • Slurred speech (NS12) • Syncope (fainting) (NS17) • Peripheral neuropathy (NS11, **sign only**)	• Hyperactivity (NS2) • Headache (NS7) • Profuse sweating (NS13) • Dizziness (NS15) • Ataxia (NS1, **symptom**) • Peripheral neuropathy (NS11, **symptom**)

ORGAN SYSTEM	SEVERITY CATEGORY AND CODE			
	FATAL	HIGH	MODERATE	LOW
	1	2	3	4
	Death	**Severe or Life-threatening Signs**	**Pronounced or Prolonged Signs or Symptoms**	**Mild, transient, and spontaneously resolving symptoms**
Cardiovascular System		• Bradycardia/ heart rate <40 for adults, < 60 infants and children, <80 neonates (CV1) • Tachycardia/ heart rate>180 for adults, >190 infants/children, >200 in neonates (CV4) • Cardiac arrest (CV2)	• Bradycardia / heart rate 40-50 in adults, 60-80 in infants/children, 80-90 in neonates (CV1) • Tachycardia / heart rate=140-180 in adults, 160-190 infants/children, 160-200 in neonates (CV4) • Chest Pain (CV7) + Hyperventilation, Tachypnea (RESP5) • Conduction disturbance (CV3) • Hypertension (CV6) • Hypotension (CV5)	
Metabolism		• Acid Base disturbance (pH< 7.15 or >7.7)	• Acid Base disturbance (pH = 7.15-7.24 or 7.60-7.69) • Elevated anion gap (MISC4)	• Fever (MISC1)
Renal System		• Anuria (GU2) • Renal failure	• Hematuria (GU3) • Oliguria (GU2) • Proteinuria (GU4)	• Polyuria (GU1)
Muscular system		• Muscle rigidity (NS9) + elevated urinary myoglobin + elevated creatinine	• Fasciculations (NS6) • Muscle rigidity (NS9) • Muscle weakness (NS8, **sign only**)	• Muscle weakness (NS8, **symptom**) • Muscle pain (NS16)
Local effects on skin		• Burns, second degree (involving >50% of body surface area) • Burns, third degree (involving >2% of body surface area)	• Bullae (DERM1) • Burns, second degree (involving <50% of body surface area) • Burns, third degree (involving <2% of body surface area)	• Skin Edema/Swelling, Erythema, Rash, Irritation/Pain, Pruritis (DERM3 - 7) • Hives/Urticaria
Local effects on eye		• Corneal ulcer/perforation	• Corneal abrasion (EYE3) • *Ocular burn (EYE2)*	• Lacrimation (EYE4) • Mydriasis (EYE6) • Miosis (EYE1) • Ocular pain/irritation/inflammation (diagnosis of conjunctivitis) (EYE5)
Other effects				• Fatigue (MISC5) • Malaise (MISC6)

Appendix C
Agency Data Summaries

Washington State Department of Agriculture

Washington State Department of Ecology, Spill Program

Washington State Department of Health

Washington State Department of Labor and Industries, WISHA

WSDA 2005 Case Data

Case#	C001 2005	Designation	PI	License	Commercial	Date	2/18/2005	Severity	1	Application Info	Crack/crevice
County	Douglas	Nature of Case	notification			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Insecticide boric acid					Other Agencies	none	Final Action	NOC	Target/Complaint Area	notification/school

Applicator applied without notifying school so the school could not notify students, staff, parents. / Verified. Also did not submit records, applied to off-label site.

Case#	C002 2005	Designation	PI	License	Private Applicator	Date	3/6/2005	Severity	2	Application Info	Ground
County	Douglas	Nature of Case	drift to property			Response time	same day	Children Involved?	no	Ag	airblast
Chemicals Involved:	Insecticide sulfur	Fungicide oil				Other Agencies	none	Final Action	NOC	Target/Complaint Area	pears/car, house

Application of lime-sulfur to pears drifted on cars and house / Verified.

Case#	C003 2005	Designation	PNI	License	NA	Date	1/10/2005	Severity	0	Application Info	N A
County	Grant	Nature of Case	misuse			Response time	same day	Children Involved?	NA	Non Ag	Residential
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	willows

Complainant thought neighbor was poisoning his willows. / Complaint was left on voicemail. Returned call by voicemail. No further contacts could be made. Complainant could not be located.

Case#	C004 2005	Designation	PI	License	Priv Ap / Comm Consultant	Date	3/18/2005	Severity	3	Application Info	Ground
County	Grant	Nature of Case	human exposure - drift			Response time	same day	Children Involved?	yes	Ag	airblast
Chemicals Involved:	Insecticide chlorpyrifos	Insecticide oil				Other Agencies	DOH	Final Action	NOI	Target/Complaint Area	apples/humans

Airblast application to apples drifted on car, driver and child. Adult and child became ill with rash and vomiting. / Residues found in car air filter (car was washed) and vegetation by site. DOH "probable" on illness. Dr. not told of possible exposure.

Case#	C005 2005	Designation	PI	License	Private Applicator	Date	3/28/2005	Severity	1	Application Info	Ground
County	Chelan	Nature of Case	human exposure - drift			Response time	same day	Children Involved?	no	Ag	airblast
Chemicals Involved:	Insecticide diazinon					Other Agencies	none	Final Action	NAI	Target/Complaint Area	cherries/person

Drift occurring from application to cherries. Says he can taste the spray drift. / Anonymous complaint. Could not find complainant. No residues detected off site.

WSDA 2005 Case Data

Case#	C006 2005	Designation	PNI	License	NA	Date	8/10/2004	Severity	1	Application Info	N A
County	Chelan	Nature of Case	exam fraud			Response time	same day	Children Involved?	no		Non Ag NA
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	exams

Person who took the exam was not the person listed on the application. / Verified, but could not determine the guilty party. The person whose name was used did not appear to be involved.

Case#	C007 2005	Designation	PNI	License	NA	Date	unknown	Severity	0	Application Info	N A
County	Douglas	Nature of Case	bee kill			Response time	same day	Children Involved?	no		Ag NA
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	bees

Bee kill. / Death of hive due to loss of queens. Hive split and may have been moved before recovery.

Case#	C008 2005	Designation	PI	License	Private Applicator	Date	5/3/2005	Severity	3	Application Info	Ground
County	Douglas	Nature of Case	human exposure - drift			Response time	same day	Children Involved?	no		Ag airblast
Chemicals Involved:	Insecticide carbaryl	Fungicide novaluron				Other Agencies	DOH	Final Action	NOI	Target/Complaint Area	apples/person, house

Airblast application to apples drifted on nearby residence. / Verified. Two women became ill (respiratory symptoms) after smelling pesticides. Residues detected. No medical sought.

Case#	C009 2005	Designation	PI	License	NA	Date	4/30/2005	Severity	1	Application Info	Ground
County	Chelan	Nature of Case	misuse			Response time	one day	Children Involved?	no		Non Ag Residential
Chemicals Involved:	Herbicide glyphosate					Other Agencies	none	Final Action	NAI	Target/Complaint Area	sprayed wetland

Complainant stated wetland was sprayed. / Could not verify that standing water was present at time of application.

Case#	C010 2005	Designation	PI	License	unknown	Date	5/5/2005	Severity	1	Application Info	unknown
County	Chelan	Nature of Case	drift to property			Response time	same day	Children Involved?	no		Ag Unknown
Chemicals Involved:	unknown unknown					Other Agencies	none	Final Action	NAI	Target/Complaint Area	orchard/property

Drift to property from orchard. / Phone was system not working so the complaint one month old. Complainant wished to drop case since the grower has since been more careful.

WSDA 2005 Case Data

Case#	C011 2005	Designation	PI	License	Private Applicator	Date	5/12/2005	Severity	2
County	Chelan	Nature of Case	drift to car			Response time	same day	Children Involved?	no
Chemicals Involved:	Insecticide sevin	Insecticide myclobutanil				Other Agencies	none	Final Action	NOC

Application Info	Ground
	Ag airblast
Target/Complaint Area	apples/car

Car drifted on from an application to apples. / Verified. Residue of both pesticides was found off target.

Case#	C012 2005	Designation	unknown	License	unknown	Date	unknown	Severity	3
County	Chelan	Nature of Case	misuse			Response time	same day	Children Involved?	no
Chemicals Involved:	unknown unknown					Other Agencies	none	Final Action	NAI

Application Info	unknown
	Non Ag Residential
Target/Complaint Area	grapes, lilacs, maples

Grape plants, maples, lilacs and rose bushes were killed along driveway. Thinks it may be due to neighbor's application. / No analysis run as little chance of finding infractor. No cost analysis of loss.

Case#	C013 2005	Designation	PI	License	Private Applicator	Date	5/23/2005	Severity	2
County	Douglas	Nature of Case	drift to cars			Response time	same day	Children Involved?	no
Chemicals Involved:	Insecticide carbaryl					Other Agencies	none	Final Action	NOC

Application Info	Ground
	Ag Airblast
Target/Complaint Area	cherries/cars

Airblast application to cherries drifted across highway and on passing cars. / Verified. Observation by WSDA employee.

Case#	C014 2005	Designation	PI	License	Unlicensed	Date	5/10/2005	Severity	1
County	Grant	Nature of Case	drift to crop			Response time	same day	Children Involved?	no
Chemicals Involved:	Herbicide unknown					Other Agencies	none	Final Action	NAI

Application Info	Ground
	Non Ag ROW
Target/Complaint Area	weeds/onions

Herbicide sprayed on roads and rights-of-way drifted and damaged onion field. / General use products applied. No residue found but damage may be due to carry over from earlier applications.

Case#	C015 2005	Designation	PI	License	Commercial	Date	5/25/2005	Severity	2
County	Chelan	Nature of Case	license/posting			Response time	same day	Children Involved?	no
Chemicals Involved:	Herbicide phenoxy					Other Agencies	none	Final Action	NOC

Application Info	Ground
	Non Ag Commercial
Target/Complaint Area	posting/license

WSDA observed an application being made to landscaping without a license on the vehicle. No posting done. / Verified

WSDA 2005 Case Data

Case#	C016 2005	Designation	PI	License	Commercial	Date	5/20/2005	Severity	2	Application Info	aerial
County	Grant	Nature of Case	drift to ornamentals			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicide bentazone	Herbicide imazamax				Other Agencies	none	Final Action	NOC	Target/Complaint Area	peas/property

Aerial application drifted to ornamentals. / Sample was positive for product in a recent application but may be from carry over.

Case#	C017 2005	Designation	PI	License	Private Applicator	Date	6/1/2005	Severity	2	Application Info	Ground
County	Chelan	Nature of Case	drift to house			Response time	same day	Children Involved?	no	Ag	airblast
Chemicals Involved:	Insecticide spinosad	Insecticide tebuconazole				Other Agencies	none	Final Action	Verbal Warning	Target/Complaint Area	cherries/property

Application to cherry orchard drifting towards complainant's house. Smelled product. / Verified. Residues on vegetation by house.

Case#	C018 2005	Designation	PI	License	Private Applicator	Date	5/31/2005	Severity	2	Application Info	Ground
County	Douglas	Nature of Case	drift to houses			Response time	one day	Children Involved?	no	Ag	airblast
Chemicals Involved:	Insecticide spinosad					Other Agencies	none	Final Action	NOC	Target/Complaint Area	apples/houses

Application from two airblast sprayers was observed drifting towards houses in strong winds. / Verified. Residue found.

Case#	C019 2005	Designation	PI	License	Commercial	Date	6/2/2005	Severity	1	Application Info	Ground
County	Chelan	Nature of Case	human exposure-drift			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Herbicide glyphosate					Other Agencies	none	Final Action	Verbal Warning	Target/Complaint Area	parking lot/bus

Bus driver said he inhaled pesticide through open window when at intersection. / Applicator said he applied glyphosate. Detectable quantities found next to application site but not on bus or driver.

Case#	C020 2005	Designation	PI	License	unknown	Date	6/1/2005	Severity	1	Application Info	unknown
County	Chelan	Nature of Case	drift to grapes			Response time	same day	Children Involved?	no	Ag	unknown
Chemicals Involved:	Herbicide phenoxy					Other Agencies	none	Final Action	NAI	Target/Complaint Area	grapes

Herbicide damage to grapes. / Unknown source, no record of leaf indexing for timing. No source found.

WSDA 2005 Case Data

Case#	C021 2005	Designation	PNI	License	Private Applicator	Date	6/5/2005	Severity	0	Application Info	Ground
County	Chelan	Nature of Case	direct spray to school bus			Response time	same day	Children Involved?	no	Ag	airblast
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	cherries/school bus

Airblast sprayer drenched windshield of school bus while spraying cherries. / Sprayers were applying water and vapor guard to dry off cherries. No pesticides involved. Advised grower it would be good to employ spotter to avoid spaying vehicles.

Case#	C022 2005	Designation	PI	License	NA	Date	6/9/2005	Severity	3	Application Info	unknown
County	Grant	Nature of Case	human exposure			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Insecticide organophosphate					Other Agencies	DOH	Final Action	NAI	Target/Complaint Area	person

Irrigation district employee hospitalized. Symptoms of OP poisoning. / Apparent gradual poisoning from exposure while delivering water to growers. Two week exposure and feeling ill. New person provided with PPE, growers cooperating in providing notification.

Case#	C023 2005	Designation	PI	License	Private Applicator	Date	6/13/2005	Severity	2	Application Info	Ground
County	Chelan	Nature of Case	drift to homes			Response time	same day	Children Involved?	no	Ag	airblast
Chemicals Involved:	Insecticide carbaryl					Other Agencies	none	Final Action	NOC	Target/Complaint Area	cherries/houses

WSDA investigator observed drift of pesticide towards adjoining homes. / Residue found on neighboring day care and residence.

Case#	C024 2005	Designation	PI	License	Private Applicator	Date	6/23/2005	Severity	1	Application Info	Ground
County	Douglas	Nature of Case	human exposure-drift			Response time	same day	Children Involved?	no	Ag	airblast
Chemicals Involved:	Insecticide thiomethoxam	Insecticide bifenzate		Insecticide oil		Other Agencies	DOH	Final Action	NAI	Target/Complaint Area	pears/persons

Two persons felt spray on face and arms while neighbor spraying pears with airblast sprayer. / No residue found off target. No evidence of drift.

Case#	C025 2005	Designation	PI	License	Commercial	Date	6/28/2005	Severity	1	Application Info	Ground
County	Chelan	Nature of Case	misuse			Response time	same day	Children Involved?	no	Ag	Residential
Chemicals Involved:	Herbicide phenoxy					Other Agencies	DOH	Final Action	NAI	Target/Complaint Area	weeds/person, water

Said county made him control weeds and he and dog became ill from pesticides. Original complaint was pesticides being sprayed by commercial applicator in creek area. / No evidence of pesticides sprayed near creek. No evidence of person or dog ill. County did not mandate use of pesticides.

WSDA 2005 Case Data

Case#	C026 2005	Designation	PI	License	Private Applicator	Date	6/28/2005	Severity	4	Application Info	Ground
County	Grant	Nature of Case	human exposure -drift			Response time	same day	Children Involved?	no	Ag	airblast
Chemicals Involved:	Insecticide azinphos-methyl	Insecticide carbaryl				Other Agencies	DOH	Final Action	NOI	Target/Complaint Area	apples/persons

Two apple thinners hospitalized after neighboring orchard application drifted on them. / Verified. Workers went to health clinic with nausea and respiratory symptoms. Numerous WPS violations also.

Case#	C027 2005	Designation	PNI	License	Commercial	Date	Jun-05	Severity	1	Application Info	Air
County	Grant	Nature of Case	drift to crop			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	potatoes/trees

Herbicide drift from aerial application to nearby potato fields. / Trees showing sulfonylurea damage but appears to be from previous years. Not due to potato application drift - other causes.

Case#	C028 2005	Designation	PI	License	Unlicensed	Date	7/11/2005	Severity	1	Application Info	Ground
County	Chelan	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	license

Commercial application being made without a commercial license. / Verified. Person had only a Private Applicator's license.

Case#	C029 2005	Designation	PI	License	Commercial	Date	7/13/2005	Severity	1	Application Info	Ground
County	Clark	Nature of Case	human exposure-notification			Response time	same day	Children Involved?	no	Non Ag	Comm to school
Chemicals Involved:	Herbicide 2,4-D	MCPP	dicamba			Other Agencies	DOH	Final Action	NAI	Target/Complaint Area	school grounds/persons

Two persons ill from spraying done on school grounds. Had asked to be notified. / School had asked applicator to notify and he did not see notice. No residue detected on complainant's property. No exposure verified. No requirement to notify. Forms provided to complainant for Pesticide Sensitive Register.

Case#	C030 2005	Designation	PI	License	Private Applicator	Date	7/20/2005	Severity	2	Application Info	Ground
County	Chelan	Nature of Case	human exposure-drift			Response time	same day	Children Involved?	no	Ag	airblast
Chemicals Involved:	Insecticide acetamiprid	Insecticide fenpyroximate				Other Agencies	none	Final Action	NOC	Target/Complaint Area	pears/car

Drift of smelly substance on his car on two occasions during night drive. / Verified drift on car. Residue found inside and outside vehicle.

WSDA 2005 Case Data

Case#	C031 2005	Designation	PI	License	Commercial	Date	7/11/2005	Severity	3	Application Info	aerial
County	Grant	Nature of Case	human exposure-drift			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Insecticide thiomethoxam	Fungicide mancozeb				Other Agencies	DOH	Final Action	NOC	Target/Complaint Area	potatoes/person

Drift from aerial application to potatoes resulted in possible human exposure. / Residue found off target. Human exposure not proven but probable.

Case#	C032 2005	Designation	PI	License	unknown	Date	6/10/2005	Severity	2	Application Info	unknown
County	Grant	Nature of Case	drift to crop			Response time	four days	Children Involved?	no	Ag	unknown
Chemicals Involved:	Herbicide phenoxy					Other Agencies	none	Final Action	NAI	Target/Complaint Area	grapes

Growers noticed 2,4-D symptoms in vineyard. / Symptoms observed, grower withdrew complaint.

Case#	C033 2005	Designation	PNI	License	Private Applicator	Date	8/1/2005	Severity	0	Application Info	Ground
County	Chelan	Nature of Case	licenses			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	apples/license

Complainant stated orchards being sprayed by non-licensed commercial applicators. / Applicators had leased land and were working under PA license.

Case#	C034 2005	Designation	PNI	License	Commercial	Date	8/3/2006	Severity	0	Application Info	aerial
County	Grant	Nature of Case	drift to crop			Response time	same day	Children Involved?	no	Ag	Air
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	apples

Suspects aerial application to potatoes or mint drifted to his apple orchard. Damaged trees and fruit. / Damage due to application of micronutrients and urea, not drift from pesticides.

Case#	C035 2005	Designation	PI	License	Private Applicator	Date	8/2&3/05	Severity	2	Application Info	Ground
County	Douglas	Nature of Case	drift to cars			Response time	same day	Children Involved?	no	Ag	airblast
Chemicals Involved:	Insecticide Azinphos-methyl					Other Agencies	none	Final Action	NOI	Target/Complaint Area	apples/cars

Neighbor drifted pesticides to his residence and parked cars while spraying apples. / WSDA detected residue on property, garage and vehicle.

WSDA 2005 Case Data

Case# **C036 2005**	Designation **PNI**	License **NA**	Date **7/5/2005**	Severity **0**	Application Info	**N A**
County **Grant**	Nature of Case **drift to crop**		Response time **same day**	Children Involved? **no**	**Ag**	**NA**
Chemicals Involved: N A NA			Other Agencies **WSU**	Final Action **NAI**	Target/Complaint Area **cherries**	

Red spotting on cherry leaves and trees defoliating rapidly. Suspects desiccant drift from potato field. / Damage due to disease, bacteria or fungi.

Case# **C037 2005**	Designation **PI**	License **Private Applicator**	Date **8/24/2005**	Severity **2**	Application Info	**Ground**
County **Douglas**	Nature of Case **drift off target**		Response time **same day**	Children Involved? **no**	**Ag**	**airblast**
Chemicals Involved: Insecticide Azinphos-methyl			Other Agencies **none**	Final Action **NOC**	Target/Complaint Area **apples/road**	

WSDA observed drift from airblast application to apples. Denied entry to conduct WPS and Use inspections. / Warrants obtained. Application contrary to label, recordkeeping and WPS violations.

Case# **C038 2005**	Designation **PI**	License **Private Applicator**	Date **8/31/2005**	Severity **2**	Application Info	**Ground**
County **Douglas**	Nature of Case **drift off target**		Response time **same day**	Children Involved? **no**	**Ag**	**airblast**
Chemicals Involved: Insecticide acetamiprid	Fungicide thiram		Other Agencies **none**	Final Action **NOC**	Target/Complaint Area **apples/property**	

WSDA observed drift from application to orchard. Plume drifting towards housing development. Grower denied entry to orchard for sampling. / Verified. Residue off target.

Case# **C039 2005**	Designation **PNI**	License **Private Applicator**	Date **8/31/2005**	Severity **0**	Application Info	**N A**
County **Douglas**	Nature of Case **unsecured containers**		Response time **same day**	Children Involved? **no**	**Ag**	**NA**
Chemicals Involved: N A NA			Other Agencies **none**	Final Action **NAI**	Target/Complaint Area **containers**	

Pesticide containers left by mix/load site and unsecured. / Visited site. Only container seen was properly secured.

Case# **C040 2005**	Designation **PNI**	License **Private Applicator**	Date **9/8/2005**	Severity **0**	Application Info	**Ground**
County **Chelan**	Nature of Case **drift on car**		Response time **one day**	Children Involved? **no**	**Ag**	**airblast**
Chemicals Involved: N A NA			Other Agencies **none**	Final Action **NAI**	Target/Complaint Area **apples/cars**	

Complainant's car was drifted on by airblast application to apples. / Product applied was calcium, not a pesticide. Advised to be more careful in future.

WSDA 2005 Case Data

Case#	C041 2005	Designation	PNI	License	Private Applicator	Date	9/19/2005	Severity	1	Application Info	N A
County	Chelan	Nature of Case	disposal of containers			Response time	same day	Children Involved?	no	Ag	NA
Chemicals Involved:	N A NA					Other Agencies	DOE	Final Action	NAI	Target/Complaint Area	containers

Disposal of pesticide containers in burn pile. / Containers removed before pile burned.

Case#	G001 2005	Designation	PNI	License	Commercial	Date	ongoing	Severity	2	Application Info	NA
County	Grant	Nature of Case	no chemigation records			Response time	same Day	Children Involved?	no	Ag	NA
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Records

Have not received chemigation records for a number of years. / Verified

Case#	G002 2005	Designation	PI	License	Public Operator	Date	9/5/2005	Severity	2	Application Info	Ground
County	Grant	Nature of Case	human exposure-drift			Response time	same Day	Children Involved?	no	Non Ag	Comm - mosq fog
Chemicals Involved:	Insecticide naled					Other Agencies	DOH	Final Action	NOC	Target/Complaint Area	mosquitoes/people

Three people exposed to mosquito fogging insecticide. / Verified. People had symptoms but did not see a doctor.

Case#	G003 2005	Designation	PI	License	Commercial	Date	9/5/2005	Severity	3	Application Info	aerial
County	Grant	Nature of Case	drift to crop			Response time	three days	Children Involved?	no	Ag	Air
Chemicals Involved:	Desiccant glufosinate-ammonium					Other Agencies	Food Safety	Final Action	NOI	Target/Complaint Area	potatoes/apples

Potato desiccant drift to apples. / Two orchards involved, drift verified on one- not the other. No residue on fruit. Economic damage undetermined.

Case#	G004 2005	Designation	PI	License	Commercial	Date	8/31/2005	Severity	3	Application Info	Ground
County	Grant	Nature of Case	human exposure- direct			Response time	three days	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Insecticide bifenthrin					Other Agencies	DOH	Final Action	NOC	Target/Complaint Area	spiders/person

Spider control spray onto building drifted into dining room of nursing home. Staff person wiped up liquid with bare hands, suffered respiratory problems and lost three days work. / Verified.

WSDA 2005 Case Data

Case#	G005 2005	Designation	PI	License	Commercial	Date	10/7/2005	Severity	4	Application Info	chemigation
County	Grant	Nature of Case	animal exposure - direct			Response time	one day	Children Involved?	no	Ag	Chemigation
Chemicals Involved:	Fumigant metam-sodium					Other Agencies	Vet	Final Action	NOI	Target/Complaint Area	potatoes/apples

Metam-sodium overspray onto pasture and trees. One horse ill. / Sprayed with end gun. Field man did not know how to shut off. Horse partially recovered.

Case#	S001 2005	Designation	PNI	License	NA	Date	unknown	Severity	0	Application Info	NA
County	Spokane	Nature of Case	draining hot tub killed trees			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	Trees

Claims draining of hot tub may have caused trees to die. / Hot tub had not been used for many years. No pesticides detected. Cause of tree deaths unknown.

Case#	S002 2005	Designation	PI	License	Commercial	Date	4/8/2005	Severity	1	Application Info	Air
County	Whitman	Nature of Case	drift to crops			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicides Miscellaneous					Other Agencies	none	Final Action	NAI	Target/Complaint Area	wheat/nursery crops

Herbicide drift to nursery plants from application to wheat. / No evidence observed drift occurred. No residues detected.

Case#	S003 2005	Designation	PI	License	NA	Date	3/31/2005	Severity	0	Application Info	Spill
County	Whitman	Nature of Case	spill of pesticide-treated grain			Response time	10 days	Children Involved?	no	Ag	NA
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	spilled grain

Large-scale spill of pesticide-treated grain within city limits. / Referral from DOE. Attempts to contact complainant were not successful. Traveled to city, no grain was seen. Complainant was eventually contacted but did not meet with WSDA. Could not verify complaint.

Case#	S004 2005	Designation	PNI	License	SPI	Date	11/7/2004	Severity	2	Application Info	WDO
County	Spokane	Nature of Case	WDO			Response time	same day	Children Involved?	no	Non Ag	NA
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOI	Target/Complaint Area	WDO termites

Missed termite infestation during WDO/SPI inspection. / Verified.

WSDA 2005 Case Data

Case#	S005 2005	Designation	PNI	License	Commercial	Date	4/13/2005	Severity	0	Application Info	NA
County	Spokane	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	unlicensed spray truck

Commercial spray truck without markings, alleged to be unlicensed. / Truck properly marked and licenses OK.

Case#	S006 2005	Designation	PI	License	Commercial	Date	4/7/2005	Severity	1	Application Info	Ground
County	Walla Walla	Nature of Case	bird deaths - misuse			Response time	one day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Rodenticide unknown					Other Agencies	DOE	Final Action	NAI	Target/Complaint Area	gophers/birds

Anonymous complaint to DOE that many birds were dying after rodenticide application to school grounds. / Custodian reported one bird (crow) acting funny. No dead or dying birds observed. Crow not found. No children present (spring break).

Case#	S007 2005	Designation	PNI	License	Unlicensed	Date	ongoing	Severity	1	Application Info	NA
County	Adams	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	License

Commercial business operating without insurance or license. / Verified.

Case#	S008 2005	Designation	PI	License	Commercial	Date	4/7/2005	Severity	4	Application Info	aerial
County	Adams	Nature of Case	drift to crops			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicide glyphosate					Other Agencies	none	Final Action	Advisory Letter	Target/Complaint Area	fallow/wheat

Aerial application to fallow ground damaged wheat. / Verified. Damage over $1000.

Case#	S009 2005	Designation	PI	License	Commercial	Date	4/7/2005	Severity	4	Application Info	aerial
County	Adams	Nature of Case	drift to crops			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicide glyphosate					Other Agencies	none	Final Action	Advisory Letter	Target/Complaint Area	fallow/wheat

Aerial application to fallow ground damaged wheat. / Verified. Damage over $1000.

WSDA 2005 Case Data

Case#	S010 2005	Designation	PNI	License	SPI	Date	2/18/2005	Severity	1	Application Info	NA
County	Spokane	Nature of Case	WDO			Response time	same day	Children Involved?	no	Non Ag	WDO/SPI
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	Verbal Warning	Target/Complaint Area	termites

Structural pest inspector missed termite infestation. / Small infestation very difficult to see. Verbal warning about subtle indicators.

Case#	S011 2005	Designation	PI	License	Commercial	Date	4/24/1998	Severity	1	Application Info	Air
County	Spokane	Nature of Case	human exposure -drift			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicide thifensulfuron-methyl	Herbicide bromoxynil				Other Agencies	DOH	Final Action	NAI	Target/Complaint Area	wheat/person

Driving open vehicle and exposed to pesticide drift. / Residue from car did not match application. Person imprecise about location of incident.

Case#	S012 2005	Designation	PI	License	Commercial	Date	4/29/2005	Severity	4	Application Info	Ground
County	Spokane	Nature of Case	direct damage			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Herbicides Miscellaneous					Other Agencies	none	Final Action	NOI	Target/Complaint Area	ornamentals

Contaminated tree and shrub application damaged landscape plants. / Verified. Commercial applicator accidentally had herbicide in insecticide/fungicide mix. Damage over $16,000. Twenty-three customers affected.

Case#	S013 2005	Designation	PI	License	Public Operator	Date	5/6/2005	Severity	1	Application Info	Ground
County	Spokane	Nature of Case	misuse			Response time	same day	Children Involved?	no	Non Ag	Public Operator
Chemicals Involved:	Herbicide 2,4-D					Other Agencies	none	Final Action	NAI	Target/Complaint Area	weeds/wetlands

Misapplication to wetland. / No evidence applied to water. Label allows near water.

Case#	S014 2005	Designation	PI	License	Commercial	Date	5/9/2005	Severity	1	Application Info	Ground
County	Pend Oreille	Nature of Case	drift to ornamentals			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicide 2,4-D					Other Agencies	none	Final Action	NOC	Target/Complaint Area	pasture/greenhouse

Herbicide drift to ornamental greenhouse from pasture application. / Detection found half way to greenhouse. No symptoms seen at green house.

WSDA 2005 Case Data

Case#	S015 2005	Designation	PNI	License	Commercial	Date	ongoing	Severity	1	Application Info	N A
County	E WA	Nature of Case	license			Response time	same day	Children Involved?	no	Ag	NA
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC?	Target/Complaint Area	license

Operating without a licensed person on site, no insurance. / License current at the time.

Case#	S016 2005	Designation	PI	License	Commercial	Date	3/1/2005	Severity	1	Application Info	Ground
County	Spokane	Nature of Case	direct damage			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Insecticide dormant oil					Other Agencies	WSU	Final Action	NAI	Target/Complaint Area	trees

Dormant oil spray applied to trees killing them. / No evidence oil spray harmed trees. Cause unknown.

Case#	S017 2005	Designation	PNI	License	Unlicensed	Date	5/15/2005	Severity	1	Application Info	Ground
County	Spokane	Nature of Case	drift to ornamentals			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	Ornamentals

Neighbor's application of herbicides damaged ornamentals. / Injury caused by insects. No drift damage seen on ornamentals.

Case#	S018 2005	Designation	PI	License	Public Operator	Date	5/11/2005	Severity	1	Application Info	Ground
County	Spokane	Nature of Case	human exposure-drift			Response time	same day	Children Involved?	no	Non Ag	ROW
Chemicals Involved:	Herbicide dicamba					Other Agencies	DOH	Final Action	NAI	Target/Complaint Area	ROW/person

Person ill from drift of pesticide. Went to emergency room. / No evidence drift occurred. Doctor report said exposure unlikely. Product has strong smell.

Case#	S019 2005	Designation	PI	License	Commercial	Date	5/25/2005	Severity	1	Application Info	Ground
County	Spokane	Nature of Case	notification			Response time	same day	Children Involved?	no	Non Ag	Commercial ROW
Chemicals Involved:	Herbicide 2.4-D					Other Agencies	NA	Final Action	NOC	Target/Complaint Area	Lawn/notification

Person not notified before landscape application. / Verified. Person on pesticide sensitive list.

WSDA 2005 Case Data

Case#	S020 2005	Designation	PI	License	Public Operator	Date	Spring 2005	Severity	1	Application Info	Ground
County	Spokane	Nature of Case	drift to crops			Response time	same day	Children Involved?	no	Ag	ROW
Chemicals Involved:	Herbicide 2,4-D	Herbicide picloram				Other Agencies	none	Final Action	NAI	Target/Complaint Area	ROW/lentils

Drift from ROW to lentil field damaged crop. / No evidence of drift. Damage may be due to flooding.

Case#	S021 2005	Designation	PI	License	Commercial	Date	May-05	Severity	4	Application Info	Ground
County	Lincoln	Nature of Case	direct damage			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicide metsulfuron-methyl	Herbicide MCPA				Other Agencies	none	Final Action	NOI	Target/Complaint Area	wheat

Herbicide application to winter wheat damaged crop. / Verified. Contrary to label - wheat past jointing stage.

Case#	S022 2005	Designation	PI	License	Commercial	Date	5/23/2005	Severity	4	Application Info	Air
County	Whitman	Nature of Case	drift to crops			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicides Miscellaneous					Other Agencies	none	Final Action	NAI	Target/Complaint Area	wheat/peas

Aerial application to wheat damaged peas. / Could not determine source of damage. Numerous applications in area.

Case#	S023 2005	Designation	PI	License	Commercial	Date	6/15/2005	Severity	1	Application Info	Ground
County	Spokane	Nature of Case	drift to ornamentals			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicide phenoxy					Other Agencies	none	Final Action	NAI	Target/Complaint Area	pasture/ornamentals

Complaint about odor, and that application to a pasture drifted to ornamentals. / No symptoms on property or nearby after one week. Complainant dropped case.

Case#	S024 2005	Designation	PNI	License	NA	Date	Jun-05	Severity	0	Application Info	N A
County	Whitman	Nature of Case	concern about application			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	Apartment house

Concerned that apartment manager was going to apply pesticides and affect health. / No products applied as yet. Will do spot spray only.

WSDA 2005 Case Data

Case#	S025 2005	Designation	PI	License	Commercial	Date	Spring 2005	Severity	1	Application Info	Ground
County	Lincoln	Nature of Case	drift to property			Response time	same day	Children Involved?	no	Ag	Agriculture
Chemicals Involved:	Herbicides Miscellaneous					Other Agencies	none	Final Action	NAI	Target/Complaint Area	wheat/property

Drift to adjacent property. / No residue found, no damage symptoms.

Case#	S026 2005	Designation	PI	License	unknown	Date	spring 2005	Severity	3	Application Info	unknown
County	Adams	Nature of Case	drift to vineyard			Response time	same day	Children Involved?	no	Ag	Agriculture
Chemicals Involved:	Herbicide phenoxy					Other Agencies	none	Final Action	NAI	Target/Complaint Area	vineyard

Herbicide drift to vineyard. / Did not record development data so could not determine date and therefore source.

Case#	S027 2005	Designation	PI	License	unknown	Date	Summer 20	Severity	2	Application Info	unknown
County	Lincoln	Nature of Case	drift to vineyard			Response time	same day	Children Involved?	no	Ag	Agriculture
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	unknown/vineyard

Herbicide drift to vineyard. / Did not record development data so could not determine date and therefore source.

Case#	S028 2005	Designation	PI	License	Commercial	Date	7/1/2005	Severity	4	Application Info	Ground
County	Spokane	Nature of Case	direct - misuse			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Herbicide diuron	Herbicide 2,4-D		Herbicide glyphosate		Other Agencies	none	Final Action	NOI	Target/Complaint Area	ornamentals

Application to ornamentals damaged them. / Verified. Commercial applicator applied herbicides contrary to label. Damage around $1000

Case#	S029 2005	Designation	PI	License	Commercial	Date	7/1/2005	Severity	4	Application Info	Ground
County	Spokane	Nature of Case	direct - misuse			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Herbicide diuron					Other Agencies	none	Final Action	NOI	Target/Complaint Area	ornamentals

Application to ornamentals damaged them. / Verified. Commercial applicator applied herbicides contrary to label. Damage around $8000

WSDA 2005 Case Data

Case#	S030 2005	Designation	PI	License	Unlicensed	Date	7/18/2005	Severity	2	Application Info	Ground
County	Spokane	Nature of Case	direct - misuse			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicide glyphosate					Other Agencies	none	Final Action	Verbal Warning	Target/Complaint Area	Lawn/notification

Neighbor's application damaged his lawn along shared fence line. / Verified. About three inch wide strip of grass damaged along fence line. Verbal warning to be careful.

Case#	S031 2005	Designation	PI	License	unknown	Date	7/1/2005	Severity	4	Application Info	unknown
County	Spokane	Nature of Case	direct-misuse			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicide Miscellaneous					Other Agencies	none	Final Action	NAI	Target/Complaint Area	Trees

Trees along river by condominiums dying. / Nine trees had holes drilled in them and herbicides detected. Could not determine source.

Case#	S032 2005	Designation	PNI	License	Unknown	Date	6/6/2005	Severity	0	Application Info	N A
County	Spokane	Nature of Case	direct			Response time	same day	Children Involved?	no	Non Ag	Ground
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	Tree

Horse chestnut tree damaged by June insecticide application. / Damage due to leaf blotch and powdery mildew.

Case#	S033 2005	Designation	PI	License	Commercial	Date	6/7/2005	Severity	3	Application Info	Ground
County	Lincoln	Nature of Case	drift to crops			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Insecticide thiocarbamate					Other Agencies	none	Final Action	NAI	Target/Complaint Area	potatoes/wheat

Application to potato field drifted and damaged wheat. / Damage not noticed until harvest. No evidence could be obtained. Most of field harvested.

Case#	S034 2005	Designation	PNI	License	NA	Date	8/5/2005	Severity	0	Application Info	N A
County	Spokane	Nature of Case	direct - misuse			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	Lawn/notification

Neighbors damaged lawn while on vacation. / Damage due to cultural practices. Drought.

WSDA 2005 Case Data

Case#	S035 2005	Designation	PI	License	Public Operator	Date	Spring 2005	Severity	2	Application Info	Ground
County	Asotin	Nature of Case	drift - trees			Response time	same day	Children Involved?	no	Non Ag	ROW
Chemicals Involved:	Herbicides diuron	glyphosate				Other Agencies	none	Final Action	NOC	Target/Complaint Area	ROW /trees

DOT damaged trees with ROW applications. / Residue detected from plants. Probably drift of diuron, glyphosate - source undetermined.

Case#	S036 2005	Designation	PI	License	unknown	Date	7/5/2005	Severity	3	Application Info	Ground
County	Whitman	Nature of Case	direct - misuse			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicides Miscellaneous					Other Agencies	Sheriff	Final Action	referred	Target/Complaint Area	property

Alleges former students sprayed pesticide mixture onto lawns, plants, etc. Sheriff investigating. / Verified. Deliberate. Turned over to Sheriff.

Case#	S037 2005	Designation	PI	License	unknown	Date	8/5/2005	Severity	0	Application Info	unknown
County	Adams	Nature of Case	drift to crops			Response time	one day	Children Involved?	no	Ag	unknown
Chemicals Involved:	Herbicide unknown					Other Agencies	none	Final Action	NAI	Target/Complaint Area	potatoes

Drift to potato field. / Complainant failed to provide requested information. Case closed.

Case#	S038 2005	Designation	PI	License	Public Operator	Date	before 2005	Severity	4	Application Info	Ground
County	Spokane	Nature of Case	drift - trees			Response time	same day	Children Involved?	no	Non Ag	ROW
Chemicals Involved:	Herbicides bromacil	diuron				Other Agencies	none	Final Action	NOI	Target/Complaint Area	ROW/trees

Application along road damaged trees. / Verified. Off- label use -near the roots of desirable trees.

Case#	S039 2005	Designation	PI	License	unknown	Date	2005	Severity	1	Application Info	Ground
County	Adams	Nature of Case	ineffective application			Response time	same day	Children Involved?	no	Ag	unknown
Chemicals Involved:	Herbicide unknown					Other Agencies	none	Final Action	NAI	Target/Complaint Area	weeds

Application to kochia ineffective. / Case closed - no further information provided by complainant.

WSDA 2005 Case Data

Case#	S040 2005	Designation	PI	License	Unlicensed	Date	3/21/2005	Severity	1	Application Info	NA
County	Franklin	Nature of Case	distribution/unregistered			Response time	same day	Children Involved?	no	Non Ag	Distribution
Chemicals Involved:	Surfactant Surfactant					Other Agencies	none	Final Action	NAI	Target/Complaint Area	Distribution

Distribution of unregistered surfactant. / Not verified. Product substituted for registered product.

Case#	T001 2005	Designation	PI	License	Dealer	Date	1/28/2005	Severity	1	Application Info	N A
County	Multiple	Nature of Case	distribution			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	Advisory Letter	Target/Complaint Area	sale of unregistered products

Chemical company offered for sale unregistered products. Complainant asked for definition of distribution. / Process for state contract bidding was clarified and agencies will be clear that only registered products can be on state contracts.

Case#	T002 2005	Designation	PNI	License	SPI	Date	9/18/2004	Severity	2	Application Info	N A
County	King	Nature of Case	faulty SPI and report			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	faulty inspection and report

Faulty SPI and report. / Verified. Failed to conduct thorough inspection, failed to report evidence and conditions of WDOs and did not diagram.

Case#	T003 2005	Designation	PNI	License	Unlicensed	Date	2/2/2005	Severity	1	Application Info	N A
County	Thurston	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	advertising w/o license

Advertising as a licensed structural pest inspector without a license. / Verified.

Case#	T004 2005	Designation	PNI	License	SPI	Date	2/7/2005	Severity	1	Application Info	N A
County	King	Nature of Case	incomplete WDO report			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	report not provided

Failed to provide WDO records on request. / Verified

WSDA 2005 Case Data

Case#	T005 2005	Designation	PNI	License	Unlicensed	Date	2/25/2005	Severity	1	Application Info	N A
County	King	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	advertising w/o license

Advertising as a licensed structural pest inspector without a license. / Verified.

Case#	T006 2005	Designation	PNI	License	Commercial	Date	2/17/2005	Severity	0	Application Info	N A
County	Pierce	Nature of Case	disposal			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	dumping pesticides

Commercial company dumping pesticides on property. / Not verified. No evidence to substantiate complaint.

Case#	T007 2005	Designation	PI	License	Dealer	Date	1/28/2005	Severity	1	Application Info	N A
County	Multiple	Nature of Case	distribution			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	Advisory Letter	Target/Complaint Area	sale of unregistered products

Chemical company offered for sale unregistered products. Complainant asked for definition of distribution. / Process for state contract bidding was clarified and agencies will be clear that only registered products can be on state contracts.

Case#	T008 2005	Designation	PI	License	Unlicensed	Date	3/7/2005	Severity	2	Application Info	Ground
County	Thurston	Nature of Case	improper PPE			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Herbicides Miscellaneous					Other Agencies	none	Final Action	NOC	Target/Complaint Area	observed improper PPE

WSDA observed application to landscape without proper PPE. / Company not licensed to make applications, no insurance, failed to keep records, did not post and used pesticides inconsistent with label.

Case#	T009 2005	Designation	PI	License	Unlicensed	Date	3/9/2005	Severity	0	Application Info	Ground
County	Snohomish	Nature of Case	drift to property			Response time	same day	Children Involved?	yes	Non Ag	Residential
Chemicals Involved:	Herbicides glyphosate					Other Agencies	DOH	Final Action	NAI	Target/Complaint Area	weeds/property

Neighbor's application drifting and damaging her plants. Thinks may affect child's health. / No evidence of any drift. Withdrew comment about health problems.

WSDA 2005 Case Data

Case#	T010 2005	Designation	PI	License	Unlicensed	Date	3/23/2005	Severity	1	Application Info	Ground
County	Thurston	Nature of Case	records			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Herbicides Miscellaneous					Other Agencies	none	Final Action	NOC	Target/Complaint Area	records

WSDA observed application to landscape without proper PPE. / Company not licensed to make applications, no insurance, failed to keep records, did not post and used pesticides inconsistent with label. Records on applications not sent in. (Same as case T008)

Case#	T011 2005	Designation	PNI	License	SPI	Date	3/16/2005	Severity	1	Application Info	N A
County	King	Nature of Case	WDO records			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOI	Target/Complaint Area	failed to provide records

Failed to provide WDO records on second request.

Case#	T012 2005	Designation	PI	License	Commercial	Date	3/21/2005	Severity	0	Application Info	Ground
County	Clark	Nature of Case	direct			Response time	five days	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Fungicide Copper					Other Agencies	none	Final Action	NAI	Target/Complaint Area	application damaged plants

Copper spray to apples drifted to nursery plants and damaged them. / Damage due to bacterial disease.

Case#	T013 2005	Designation	PI	License	Private Applicator	Date	4/19/2005	Severity	2	Application Info	Ground
County	Pierce	Nature of Case	use inspection deficiencies, WPS			Response time	same day	Children Involved?	no	Ag	Agriculture
Chemicals Involved:	Miscellaneous Miscellaneous					Other Agencies	none	Final Action	NOI	Target/Complaint Area	use inspection deficiencies

Follow-up use inspection at farm previously issued an NOC found application without direct supervision, faulty, careless, negligent, false information to WSDA, no WPS training, WPS problems.

Case#	T014 2005	Designation	PI	License	Unlicensed	Date	11/16/2004	Severity	1	Application Info	N A
County	Clallam	Nature of Case	sale of no registered pesticides			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	sale of unregistered products

Sale of unregistered 25(b) products. / Verified.

WSDA 2005 Case Data

Case#	T015 2005	Designation	PI	License	Commercial	Date	4/19/2005	Severity	2	Application Info	Ground
County	King	Nature of Case	human exposure - drift			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Insecticide permethrin					Other Agencies	DOH	Final Action	NOC	Target/Complaint Area	landscape/person

Landscape application drifted and entered her property. Felt on arm and had headache. / No evidence that pesticide application contacted person. Numerous other application deficiencies.

Case#	T016 2005	Designation	PI	License	Unlicensed	Date	4/17/2005	Severity	2	Application Info	Ground
County	Thurston	Nature of Case	drift to property			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Insecticide unknown					Other Agencies	none	Final Action	NOC	Target/Complaint Area	weeds/plants

Ortho wasp and bee killer used along fence and damaged her plants. / Unknown which product used, several labels of similar types. Some require rinse off of desirable plants. Probably solvent damage.

Case#	T017 2005	Designation	PI	License	Unlicensed	Date	3/1/2005	Severity	4	Application Info	Ground
County	King	Nature of Case	misuse			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicides Miscellaneous					Other Agencies	Police	Final Action	NOC	Target/Complaint Area	trees

Several neighbors reported trees damaged . Alleged to be blocking view. / Verified. One person apparently cut plants and/or applied pesticides to trees and shrubs.

Case#	T018 2005	Designation	PI	License	Unlicensed	Date	4/15/2005	Severity	2	Application Info	unknown
County	Island	Nature of Case	misuse			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicides phenoxy					Other Agencies	none	Final Action	NAI	Target/Complaint Area	plants

Said neighbor damaged her trees with herbicide. / Symptoms seen on plants on fence line, no source found.

Case#	T019 2005	Designation	PI	License	Unlicensed	Date	4/28/2005	Severity	1	Application Info	Ground
County	Skagit	Nature of Case	human exposure- drift			Response time	same day	Children Involved?	no	Ag	Agriculture
Chemicals Involved:	Herbicide glyphosate					Other Agencies	none	Final Action	NAI	Target/Complaint Area	pasture/person

Neighbor sprayed pasture and spray contacted her arm. / No residue on cast (one arm) and no injury noted to complainant's yard.

WSDA 2005 Case Data

Case#	T020 2005	Designation	PNI	License	SPI	Date	6/21/1999	Severity	2	Application Info	N A
County	Skagit	Nature of Case	faulty SPI and report			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Faulty SPI and report

Faulty SPI and report. / Verified. Failed to conduct through inspection, failed to report evidence and conditions of WDOs and did not diagram.

Case#	T021 2005	Designation	PI	License	Unlicensed	Date	3/22/2005	Severity	1	Application Info	Ground
County	Skagit	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Insecticide cyfluthrin					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Unlicensed applicator

Applied pesticide commercially to control ants without a license. / Verified. Did not keep records.

Case#	T022 2005	Designation	PI	License	Commercial	Date	4/27/2005	Severity	2	Application Info	Ground
County	Snohomish	Nature of Case	dog death			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Herbicide phenoxy	Insecticide potassium salts				Other Agencies	State Vet	Final Action	NOC	Target/Complaint Area	dog death

Puppy died after application made to lawn. / Vet report did not attribute death to pesticides. Puppy not in good health. No evidence of any pesticides off target. Numerous operating and licensing violations.

Case#	T023 2005	Designation	PI	License	Private Applicator	Date	5/1/2005	Severity	1	Application Info	Ground
County	Skagit	Nature of Case	drift to plants			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicide clomazone					Other Agencies	none	Final Action	Advisory Letter	Target/Complaint Area	cucumbers/ornamentals

Drift from application to ornamentals. / No residue found but symptoms consistent with clomazone. May have been residue left in tank.

Case#	T024 2005	Designation	PI	License	unknown	Date	4/15/2005	Severity	3	Application Info	Ground
County	Skagit	Nature of Case	misuse			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicide phenoxy					Other Agencies	none	Final Action	NAI	Target/Complaint Area	trees

Trees damages from herbicide spray. / Verified. Trees allegedly blocking view. Could not find source.

WSDA 2005 Case Data

Case# **T025 2005**	Designation **PNI**	License **Private Comm Ap**	Date **6/1/2005**	Severity **1**	Application Info	**NA**
County **King**	Nature of Case **records request**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Commercial SPI**
Chemicals Involved: N A NA			Other Agencies **none**	Final Action **NOC**	Target/Complaint Area **records**	

WSDA requested records from 4 applicators. / No records received.

Case# **T026 2005**	Designation **PI**	License **Private Applicator**	Date **6/1/2005**	Severity **2**	Application Info	**Ground**
County **Grays Harbor**	Nature of Case **human exposure -drift**		Response time **same day**	Children Involved? **no**	**Ag**	**Commercial**
Chemicals Involved: Insecticide chlorpyridazin			Other Agencies **DOH**	Final Action **NOC**	Target/Complaint Area **ornamentals/persons**	

WSDA Sudden Oak Death inspectors contacted spray when doing green house inspections. / Applications made properly with WPS precautions. WSDA employees were on site without escort. NOC on recordkeeping violations.

Case# **T027 2005**	Designation **PI**	License **Unlicensed**	Date **5/15/2005**	Severity **3**	Application Info	**Unknown**
County **King**	Nature of Case **misuse**		Response time **four days**	Children Involved? **no**	**Non Ag**	**Residential SPI**
Chemicals Involved: Herbicide glyphosate			Other Agencies **none**	Final Action **NAI**	Target/Complaint Area **ornamentals**	

Neighbor applied herbicide to plants on property line without permission. / Glyphosate damage on plants. Property line dispute. No source found.

Case# **T028 2005**	Designation **PNI**	License **SPI**	Date **11/11/2004**	Severity **2**	Application Info	**NA**
County **Clark**	Nature of Case **faulty SPI and report**		Response time **same day**	Children Involved? **no**	**Non Ag**	**SPI license**
Chemicals Involved: N A NA			Other Agencies **none**	Final Action **NOC**	Target/Complaint Area **faulty inspection and report**	

Faulty SPI and report. / Verified. Failed to conduct thorough inspection, failed to report evidence and conditions of WDOs and did not diagram.

Case# **T029 2005**	Designation **PI**	License **Unlicensed**	Date **5/22/2005**	Severity **3**	Application Info	**Ground**
County **King**	Nature of Case **direct to plants**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Residential**
Chemicals Involved: Herbicide glyphosate			Other Agencies **none**	Final Action **NOC**	Target/Complaint Area **plants**	

Neighbor made application to her backyard without permission and damaged plants. / Verified.

WSDA 2005 Case Data

Case# **T030 2005**	Designation **PI**	License **Unlicensed**	Date **6/1/2005**	Severity **1**	Application Info **NA**	
County **King**	Nature of Case **license**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Commercial WDO**
Chemicals Involved: N A NA			Other Agencies **none**	Final Action **NOC**	Target/Complaint Area **license**	

Application records request showed 4 people making commercial applications without license.

Case# **T031 2005**	Designation **PI**	License **NA**	Date **4/15/2005**	Severity **0**	Application Info **NA**	
County **Pierce**	Nature of Case **misuse**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Residential SPI**
Chemicals Involved: N A NA			Other Agencies **none**	Final Action **NAI**	Target/Complaint Area **damaged plants**	

Said neighbors sprayed plants on her property. / Some evidence of herbicide damage seen. No source found.

Case# **T032 2005**	Designation **PI**	License **unknown**	Date **5/15/2005**	Severity **2**	Application Info **Unknown**	
County **King**	Nature of Case **misuse**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Residential**
Chemicals Involved: Herbicide glyphosate			Other Agencies **none**	Final Action **NAI**	Target/Complaint Area **damaged plants**	

Said neighbor spayed her plants and damaged them. / Residue found of glyphosate. Neighbor dispute. No source found.

Case# **T033 2005**	Designation **PNI**	License **SPI**	Date **6/26/2005**	Severity **1**	Application Info **NA**	
County **Spokane**	Nature of Case **SPI report**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Commercial SPI**
Chemicals Involved: N A NA			Other Agencies **none**	Final Action **NOC**	Target/Complaint Area **Failure to provide report**	

Failure to provide SPI report upon request.

Case# **T034 2005**	Designation **PNI**	License **SPI**	Date **6/17/2005**	Severity **1**	Application Info **NA**	
County **Clark**	Nature of Case **SPI report**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Commercial WDO**
Chemicals Involved: N A NA			Other Agencies **none**	Final Action **NOC**	Target/Complaint Area **Failure to provide report**	

Failure to provide SPI report upon request.

WSDA 2005 Case Data

Case#	T035 2005	Designation	PI	License	unknown	Date	5/26/2005	Severity	0	Application Info	unknown
County	King	Nature of Case	human exposure-drift			Response time	one day	Children Involved?	no	Non Ag	Commercial SPI
Chemicals Involved:	unknown unknown					Other Agencies	DOH	Final Action	NAI	Target/Complaint Area	lawn/persons, deck

DOH referred a call about a possible drift from a Commercial lawn application on two people sitting on a deck at their house. / WSDA tried to contact complainants without results. No calls returned.

Case#	T036 2005	Designation	PI	License	unknown	Date	5/28/2005	Severity	2	Application Info	Ground
County	King	Nature of Case	misuse			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicide glyphosate					Other Agencies	none	Final Action	NAI	Target/Complaint Area	grass

Said neighbor used herbicide on her property without permission. / Glyphosate residue detected. Minor plant damage. No source determined.

Case#	T037 2005	Designation	PNI	License	SPI	Date	9/13/2004	Severity	2	Application Info	N A
County	Pierce	Nature of Case	faulty SPI and report			Response time	same day	Children Involved?	no	Non Ag	SPI
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Faulty SPI and report

Faulty SPI and report. / Verified. Failed to conduct thorough inspection, failed to report evidence and conditions of WDOs and did not diagram.

Case#	T038 2005	Designation	PI	License	Private Commercial Ap	Date	6/15/2005	Severity	1	Application Info	Ground
County	Mason	Nature of Case	notification			Response time	same day	Children Involved?	no	Non Ag	Commercial Landscape
Chemicals Involved:	Insecticide thiram	Fungicide polyoxin				Other Agencies	none	Final Action	NOC	Target/Complaint Area	notification

Failed to notify. On pesticide sensitive list. / Verified. Golf course application. Failure to keep records.

Case#	T039 2005	Designation	PNI	License	SPI	Date	10/13/2004	Severity	0	Application Info	N A
County	Spokane	Nature of Case	faulty SPI and report			Response time	same day	Children Involved?	no	Non Ag	Residential SPI
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	Failure to note termites

Failed to note presence of termites. / Insufficient evidence to determine termites were present at time of inspection.

WSDA 2005 Case Data

Case#	T040 2005	Designation	PNI	License	Unlicensed	Date	8/24/2005	Severity	1	Application Info	N A
County	King	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial SPI
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	SPI license

Unlicensed SPI inspector. / Verified. Also failure to keep records.

Case#	T041 2005	Designation	PNI	License	SPI	Date	8/10/2005	Severity	1	Application Info	N A
County	King	Nature of Case	failure to submit SPI report			Response time	same day	Children Involved?	no	Non Ag	ROW
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	failure to submit SPI report

Failure to submit SPI report on request. / Verified

Case#	T042 2005	Designation	PI	License	Commercial	Date	6/6/2005	Severity	1	Application Info	Ground
County	Clark	Nature of Case	records			Response time	same day	Children Involved?	no	Non Ag	Residential WDO
Chemicals Involved:	Insecticide permethrin					Other Agencies	none	Final Action	NOC	Target/Complaint Area	ants/ report

Complainant had concerns regarding treatment for carpenter ants. / Failed to keep complete records.

Case#	T043 2005	Designation	PNI	License	Unlicensed	Date	6/8/2005	Severity	1	Application Info	N A
County	San Juan	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial SPI
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Doing SPI without license

Doing SPI inspections without being licensed. / Verified. Also no insurance and incomplete records.

Case#	T044 2005	Designation	PI	License	Unlicensed	Date	unknown	Severity	1	Application Info	Ground
County	Cowlitz	Nature of Case	misuse			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicide glyphosate					Other Agencies	none	Final Action	Verbal Warning	Target/Complaint Area	trees

States neighbor using herbicide on property line cedar trees. / Neighbor did use glyphosate. Trees have minor damage. Neighbor neighbor dispute.

WSDA 2005 Case Data

Case#	T045 2005	Designation	PNI	License	SPI	Date	2/28/2005	Severity	2	Application Info	N A
County	Thurston	Nature of Case	faulty SPI and report			Response time	same day	Children Involved?	no	Non Ag	SPI
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Faulty SPI and report

Faulty SPI and report. / Verified. Failed to conduct thorough inspection, failed to report evidence and conditions of WDOs and did not diagram.

Case#	T046 2005	Designation	PI	License	unlicensed	Date	7/1/2005	Severity	1	Application Info	Ground
County	Snohomish	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial WDO
Chemicals Involved:	Insecticide pyrethrins					Other Agencies	none	Final Action	NOC	Target/Complaint Area	fleas/License

WDO treatment overused insecticide for fleas when doing rodent control. Concern re: license. / Verified. No Commercial Applicator license, no insurance. Did not maintain records.

Case#	T047 2005	Designation	PNI	License	SPI	Date	8/15/2005	Severity	1	Application Info	N A
County	King	Nature of Case	failure to submit SPI records			Response time	same day	Children Involved?	no	Non Ag	Commercial SPI
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOI	Target/Complaint Area	failure to submit SPI records

Failure to submit SPI records on second request. / Verified.

Case#	T048 2005	Designation	PNI	License	unknown	Date	3/5/2005	Severity	0	Application Info	N A
County	Pierce	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	License

Failure to have license and keep application records. / Not verified, lack of evidence.

Case#	T049 2005	Designation	PNI	License	SPI	Date	5/14/2005	Severity	0	Application Info	N A
County	King	Nature of Case	faulty SPI and report			Response time	same day	Children Involved?	no	Non Ag	Commercial SPI
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	Failed to notice mold

Failed to notice mold during SPI inspection. / Report stated attic area was excluded from inspection.

WSDA 2005 Case Data

Case#	T050	2005	Designation	PI	License	Commercial	Date	8/1/2005	Severity	1	Application Info	Ground
County	Pierce		Nature of Case	misuse			Response time	10 days	Children Involved?	no	Non Ag	Commercial Landscape
Chemicals Involved:	Herbicide glyphosate		Herbicide simazine		Herbicide diuron		Other Agencies	none	Final Action	NAI	Target/Complaint Area	weeds/ornamentals

Neighbor directed commercial applicator to spray his property without permission. / Uncertain property boundary. Differences resolved among parties.

Case#	T051	2005	Designation	PI	License	Unlicensed	Date	6/15/2005	Severity	1	Application Info	Ground
County	Pierce		Nature of Case	misuse			Response time	one day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicide phenoxy						Other Agencies	none	Final Action	NAI	Target/Complaint Area	blackberries

Neighbor sprayed his property without permission. / Symptoms seen on blackberries, no residue detected. No proof - neighbor/neighbor dispute.

Case#	T052	2005	Designation	PNI	License	NA	Date	9/21/2005	Severity	0	Application Info	NA
County	King		Nature of Case	misuse			Response time	one day	Children Involved?	no	Non Ag	Commercial WDO
Chemicals Involved:	N A NA						Other Agencies	none	Final Action	NAI	Target/Complaint Area	roads and sidewalks

Company making application of chemicals to Pike Place Market roads and sidewalk areas. / Sanitation company pumping grease from local businesses.

Case#	T053	2005	Designation	PI	License	Public Operator	Date	7/12/2005	Severity	1	Application Info	Ground
County	Cowlitz		Nature of Case	drift on organic grapes			Response time	same day	Children Involved?	no	ROW	ROW
Chemicals Involved:	Herbicide triclopyr		Herbicide 2,4-D				Other Agencies	none	Final Action	Verbal Warning	Target/Complaint Area	ROW/grapes

DOT ROW spray damaged grape vines. / Symptoms seen, residue not detected.

Case#	T054	2005	Designation	PI	License	Unlicensed	Date	6/15/2005	Severity	1	Application Info	Ground
County	Cowlitz		Nature of Case	misuse			Response time	same day	Children Involved?	no	Non Ag	WDO
Chemicals Involved:	Herbicide triclopyr		2,4-D				Other Agencies	none	Final Action	NAI	Target/Complaint Area	Blackberries

Neighbor sprayed blackberries without permission. / Blackberries showed symptoms and residue. On easement road, neighbor neighbor dispute - resolving in court.

WSDA 2005 Case Data

Case# **T055 2005**	Designation **PI**	License **Dealer**	Date **10/2/2003**	Severity **1**	Application Info	**N A**
County **King**	Nature of Case **purchase of RUP w/o license**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Commercial**
Chemicals Involved: Insecticide chlorpyrifos			Other Agencies **none**	Final Action **NOI**	Target/Complaint Area **purchase of RUP w/o license**	

Purchase of RUP without license. / Verified. Dealer sold to unlicensed persons and did not keep distribution records.

Case# **T056 2005**	Designation **PI**	License **Unlicensed**	Date **7/19/2005**	Severity **2**	Application Info	**Ground**
County **Kitsap**	Nature of Case **misuse**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Commercial**
Chemicals Involved: Herbicide copper napthanate			Other Agencies **none**	Final Action **NOC**	Target/Complaint Area **roof/plants**	

Concerned that roof application harming plants, getting into water. / Commercial application to roof made by unlicensed applicator. Roof treatment came into contact with plants. Water contact not verified.

Case# **T057 2005**	Designation **PNI**	License **SPI**	Date **10/15/2004**	Severity **2**	Application Info	**N A**
County **Grays Harbor**	Nature of Case **faulty SPI and report**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Commercial SPI**
Chemicals Involved: N A NA			Other Agencies **none**	Final Action **NOI**	Target/Complaint Area **Faulty SPI and report**	

Faulty SPI and report. / Verified. Failed to conduct thorough inspection, failed to report evidence and conditions of WDOs and did not diagram.

Case# **T058 2005**	Designation **PI**	License **Unlicensed**	Date **10/4/2004**	Severity **1**	Application Info	**N A**
County **Clark**	Nature of Case **distribution**		Response time **same day**	Children Involved? **no**	**Ag**	**Commercial WDO**
Chemicals Involved: Fungicide ethoxyquin	copper		Other Agencies **EPA**	Final Action **NOC**	Target/Complaint Area **unregistered pesticide**	

Box of unregistered fruit wrap paper brought to Yakima WSDA office. / Pear wrap paper being distributed in WA without EPA or state registration.

Case# **T059 2005**	Designation **PNI**	License **SPI**	Date **10/19/2005**	Severity **2**	Application Info	**N A**
County **Pierce**	Nature of Case **faulty SPI and report**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Commercial WDO**
Chemicals Involved: N A NA			Other Agencies **none**	Final Action **NOC**	Target/Complaint Area **Faulty SPI and report**	

Faulty SPI and report. / Verified. Failed to conduct thorough inspection, failed to report evidence and conditions of WDOs and did not diagram.

WSDA 2005 Case Data

Case#	T060 2005	Designation	PI	License	Unlicensed	Date	10/31/2005	Severity	2	Application Info	Ground
County	King	Nature of Case	misuse			Response time	same day	Children Involved?	no	Non Ag	Commercial SPI
Chemicals Involved:	Fungicide copper napthanate					Other Agencies	none	Final Action	NOC	Target/Complaint Area	wood

Wood preservative used inside house by unlicensed applicator. / Verified. Product only for outside use. No commercial license.

Case#	T061 2005	Designation	PNI	License	Private Applicator	Date	6/1/2005	Severity	1	Application Info	NA
County	Mason	Nature of Case	misuse			Response time	same day	Children Involved?	no	Ag	Exam
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Christmas trees

Christmas tree growers using DDT and agent orange. / Unfounded allegations, NOC on storage and records.

Case#	T062 2005	Designation	PI	License	Unlicensed	Date	11/29/2005	Severity	1	Application Info	N A
County	Mason	Nature of Case	license			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	EPA	Final Action	NOC	Target/Complaint Area	Christmas trees

During inspection of Christmas tree farm, found owner had obtained non-registered pesticide from PUD, PUD not licensed as dealer, records not kept.

Case#	T063 2005	Designation	PI	License	Unlicensed	Date	2004/2005	Severity	1	Application Info	N A
County	Clark	Nature of Case	distribution			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Fungicide ethoxyquin	copper				Other Agencies	EPA	Final Action	NOC	Target/Complaint Area	unregistered pesticide

Unregistered fungicide paper being distributed. / Verified. Same case as T058

Case#	T064 2005	Designation	PNI	License	Unlicensed	Date	4/26/2005	Severity	1	Application Info	N A
County	Snohomish	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial WDO
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Doing WDO w/o license

Performing Structural pest inspections without license. / Verified

WSDA 2005 Case Data

Case#	T065 2005	Designation	PNI	License	Unlicensed	Date	10/9/2005	Severity	1	Application Info	N A
County	Kitsap	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial WDO
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Doing WDO w/o license

Performing Structural pest inspections without license. / Verified

Case#	T066 2005	Designation	PNI	License	Unlicensed	Date	11/26/2005	Severity	1	Application Info	N A
County	Kitsap	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Agriculture WDO
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Doing WDO w/o license

Performing Structural pest inspections without license. / Verified

Case#	T067 2005	Designation	PI	License	Unlicensed	Date	11/29/2005	Severity	2	Application Info	N A
County	Western WA	Nature of Case	distribution			Response time	one day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Distribution. License

Commercial company distributing unregistered pesticides by non-licensed dealer outlet. Records, storage and misbranding violations.

Case#	T068 2005	Designation		License		Date		Severity		Application Info	
County	Duplicate-see T71	Nature of Case				Response time		Children Involved?			Commercial
Chemicals Involved:						Other Agencies		Final Action		Target/Complaint Area	

Duplicated number - same case as T71.

Case#	T069 2005	Designation	PNI	License	SPI	Date	9/13/2005	Severity	2	Application Info	N A
County	Pierce	Nature of Case	faulty SPI and report			Response time	same day	Children Involved?	no	Non Ag	SPI
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOI	Target/Complaint Area	Faulty SPI and report

Faulty SPI and report. / Verified. Failed to conduct thorough inspection, failed to report evidence and conditions of WDOs and did not diagram.

WSDA 2005 Case Data

Case#	T070 2005	Designation	PNI	License	SPI	Date	12/20/2005	Severity	1	Application Info	N A
County	Pierce	Nature of Case	failure to provide records			Response time	same day	Children Involved?	no	Non Ag	WDO
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	Advisory Letter	Target/Complaint Area	records

Failure to provide WDO records.

Case#	T071 2005	Designation	PNI	License	Unlicensed	Date	12/5/06	Severity	2	Application Info	N A
County	Western WA	Nature of Case	unlicensed applicator			Response time	one day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	License

Unlicensed commercial applicator. / Verified, Cannot locate infractor.

Case#	T072 2005	Designation	PNI	License	SPI	Date	7/6/2005	Severity	2	Application Info	N A
County	Skagit	Nature of Case	faulty SPI and report			Response time	same day	Children Involved?	no	Non Ag	Commercial SPI
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOC	Target/Complaint Area	Faulty SPI and report

Faulty SPI and report. / Verified, Failed to note WDOs, unlicensed, no control number on report.

Case#	Y001 2005	Designation	PNI	License	NA	Date	1/11/2005	Severity	0	Application Info	NA
County	Franklin	Nature of Case	exam fraud			Response time	same day	Children Involved?	no	Non Ag	Exam
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	photographing exam

Simplot employee observed two people photographing what he thought was WSDA exam with cell phone. / Persons were photographing WSU sample exam questions, not real exam.

Case#	Y002 2005	Designation	PI	License	Unlicensed	Date	2004/2005	Severity	2	Application Info	NA
County	Yakima	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NOI	Target/Complaint Area	license

Applications by unlicensed person. / Verified, warrants needed to get records, numerous recordkeeping and misuse issues.

WSDA 2005 Case Data

Case#	Y003 2005	Designation	PI	License	Private Applicator	Date	3/20/2005	Severity	4	Application Info	Ground
County	Yakima	Nature of Case	human, animal exposure -drift			Response time	same day	Children Involved?	no	Ag	Residential
Chemicals Involved:	Insecticide Chlorpyrifos	oil				Other Agencies	none	Final Action	NOI	Target/Complaint Area	orchard/person, animals

Application to orchard drifted to person, cattle, dog and cats. / Person became ill. Dr. thought possible OP poisoning. Residue detected off target.

Case#	Y004 2005	Designation	PI	License	Dealer	Date	3/23/2005	Severity	1	Application Info	NA
County	Benton	Nature of Case	sale			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Herbicide 2,4-D					Other Agencies	none	Final Action	NOC	Target/Complaint Area	sale to unlicensed

Selling 2,4-D in 2.5 gallon containers without checking on license. / Verified. Unaware of recordkeeping requirements.

Case#	Y005 2005	Designation	PI	License	Dealer	Date	3/23/2005	Severity	1	Application Info	NA
County	Franklin	Nature of Case	sale			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	Herbicide 2,4-D					Other Agencies	none	Final Action	NOC	Target/Complaint Area	sale to unlicensed

Selling 2,4-D in 2.5 gallon containers without checking on license. / Verified. Unaware of recordkeeping requirements.

Case#	Y006 2005	Designation	PI	License	Private Ap / Public Operator	Date	spring 2005	Severity	1	Application Info	Ground
County	Walla Walla	Nature of Case	drift to crop			Response time	same day	Children Involved?	no	Ag	ROW
Chemicals Involved:	Herbicides Miscellaneous					Other Agencies	none	Final Action	NOC	Target/Complaint Area	ROW, wheat/onions

Complainant said product drifted to his onions from either application to wheat or to ROW. / All samples tested negative. Application records from farmer were incomplete.

Case#	Y007 2005	Designation	PI	License	Private Applicator	Date	4/25/2005	Severity	3	Application Info	Ground
County	Benton	Nature of Case	human exposure - drift			Response time	same day	Children Involved?	yes	Ag	Agriculture
Chemicals Involved:	Insecticide myclobutanil	Insecticide spinosad		Insecticide Carbaryl		Other Agencies	DOH	Final Action	NOC	Target/Complaint Area	cherries/school bus

School bus driver said bus with children on board was drifted on from application to orchard. Driver has possible symptoms, children did not. / Bus was washed, DOH did not investigate, no symptoms substantiated. No symptoms for children. NOC because of testimony.

WSDA 2005 Case Data

Case#	Y008 2005	Designation	PI	License	Commercial	Date	5/13/2005	Severity	2	Application Info	Ground
County	Yakima	Nature of Case	drift to property			Response time	same day	Children Involved?	no	Non Ag	WDO
Chemicals Involved:	Insecticide cyhalothrin					Other Agencies	none	Final Action	NOCs	Target/Complaint Area	landscape/property

Landscape applicator drifted on motor home, shed and plants. / Verified. Improper supervision, records problem.

Case#	Y009 2005	Designation	PI	License	Commercial	Date	5/19/2005	Severity	4	Application Info	Ground
County	Franklin	Nature of Case	human exposure - drift			Response time	same day	Children Involved?	no	Ag	Residential
Chemicals Involved:	Herbicide atrazine	Herbicide alachlor				Other Agencies	DOH	Final Action	NOI	Target/Complaint Area	corn/persons

Application to corn drifted on 15 people at greenhouse operation. Several felt ill and one went to the hospital. / Verified. Wind blowing towards greenhouse. Health symptoms short term.

Case#	Y010 2005	Designation	PI	License	unknown	Date	5/20/2005	Severity	4	Application Info	unknown
County	Benton	Nature of Case	drift to crop			Response time	same day	Children Involved?	no	Ag	ROW
Chemicals Involved:	Herbicide phenoxys					Other Agencies	none	Final Action	NAI	Target/Complaint Area	grapes

Drift of 2,4-D to vineyard. / Verified. Damage extensive but no source proven.

Case#	Y011 2005	Designation	PI	License	Public Operator	Date	5/28/2005	Severity	2	Application Info	Ground
County	Franklin	Nature of Case	drift to trees			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicides Miscellaneous					Other Agencies	none	Final Action	NOC	Target/Complaint Area	trees

Homeowner claimed application to church property damaged trees. / No residue detected from trees. Several applications in area. Public Operator at one site made an off-label application. NOC issued for this.

Case#	Y012 2005	Designation	PNI	License	Commercial	Date	6/13/2005	Severity	0	Application Info	NA
County	Yakima	Nature of Case	license			Response time	same day	Children Involved?	no	Non Ag	Commercial
Chemicals Involved:	N A NA					Other Agencies	none	Final Action	NAI	Target/Complaint Area	unlicensed applicator

Unlicensed commercial applicator. / Company sold. Properly licensed and insured.

WSDA 2005 Case Data

Case#	Y013 2005	Designation	PI	License	Commercial	Date	4/13/2005	Severity	1	Application Info	Air
County	Walla Walla	Nature of Case	direct to crop			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicide dicamba	Herbicide MCPA				Other Agencies	none	Final Action	NAI	Target/Complaint Area	wheat

Contaminated product applied to wheat damaged crop. / No residue of glyphosate found in samples. Pennsylvania lab reported low level of glyphosate. Unresolved.

Case#	Y014 2005	Designation	PI	License	Unlicensed	Date	3/16/2005	Severity	1	Application Info	Ground
County	Klickitat	Nature of Case	human exposure - direct			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicide glyphosate					Other Agencies	DOH/Police	Final Action	NAI	Target/Complaint Area	weeds/person

Person said applicator sprayed her in face when she tried to get her dog away. / No evidence exposure occurred. Medical opinion symptoms due to flu, no injury seen.

Case#	Y015 2005	Designation	PI	License	Commercial	Date	6/15/2005	Severity	2	Application Info	Air
County	Benton	Nature of Case	drift to crop			Response time	same day	Children Involved?	no	Ag	Residential
Chemicals Involved:	Herbicides mscl					Other Agencies	none	Final Action	Advisory letters	Target/Complaint Area	potatoes/cherries

Application to potatoes drifted on cherries. / Verified. Could not determine which of two applicators.

Case#	Y016 2005	Designation	PI	License	Referred	Date	6/22/2005	Severity	2	Application Info	Ground
County	Yakima	Nature of Case	drift to property			Response time	same day	Children Involved?	no	Ag	Agriculture
Chemicals Involved:	Fungicide sulfur					Other Agencies	Yakama Nation	Final Action	Referred	Target/Complaint Area	hops/property

Application to hops drifted on adjacent property. / Verified. Case referred to Yakama Nation as hop field is on reservation. Residues found.

Case#	Y017 2005	Designation	PI	License	unknown	Date	5/20/2005	Severity	3	Application Info	Unknown
County	Benton	Nature of Case	drift to crop			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	Herbicide phenoxys					Other Agencies	none	Final Action	NAI	Target/Complaint Area	vineyard

Phenoxy symptoms on 500 acres of vineyard. / Verified . No source determined.

WSDA 2005 Case Data

Case#	**Y018 2005**	Designation	**PI**	License	**Public Operator**	Date	**6/5/2005**	Severity	**2**	Application Info	**Ground**
County	**Yakima**	Nature of Case	**drift to ornamentals**			Response time	**same day**	Children Involved?	**no**	**ROW**	**Commercial**
Chemicals Involved:	Herbicide 2.4-D	Herbicide glyphosate				Other Agencies	**DOE**	Final Action	**NOC**	Target/Complaint Area	**ROW/ornamentals**

ROW application along ditch damaged ornamentals. / Property line dispute. NOC on off label use.

Case#	**Y019 2005**	Designation	**PI**	License	**Commercial**	Date	**7/1/2005**	Severity	**2**	Application Info	**Air**
County	**Franklin**	Nature of Case	**drift to property**			Response time	**same day**	Children Involved?	**no**	**Ag**	**Agriculture**
Chemicals Involved:	Insecticide methamidiphos	Insecticide sulfur				Other Agencies	**none**	Final Action	**NOI**	Target/Complaint Area	**potatoes/property**

Aerial application to potatoes drifted to cars, patio and garden. / Verified by residue. No health complaints or crop damage.

Case#	**Y020 2005**	Designation	**PI**	License	**Commercial**	Date	**6/25/2005**	Severity	**2**	Application Info	**Ground**
County	**Yakima**	Nature of Case	**misuse**			Response time	**same day**	Children Involved?	**no**	**Non Ag**	**Agriculture**
Chemicals Involved:	Insecticide imidacloprid					Other Agencies	**none**	Final Action	**NOC**	Target/Complaint Area	**Earwigs**

Commercial application to control earwigs did not work. / Applicator treated for carpenter ants and rodents. No sign of either on premises. Treatment for earwigs not best chemical. Failed to keep and provide proper records.

Case#	**Y021 2005**	Designation	**PI**	License	**Unlicensed**	Date	**6/27/2005**	Severity	**2**	Application Info	**Ground**
County	**Okanogan**	Nature of Case	**human exposure -drift**			Response time	**same day**	Children Involved?	**no**	**Non Ag**	**Agriculture**
Chemicals Involved:	Herbicide dichlobenil					Other Agencies	**DOH**	Final Action	**NOC**	Target/Complaint Area	**weeds/person, dog**

Next door neighbor used chemical over rate and made her and dogs ill. Also drifted on property. / No evidence of exposure to people or animals (possible odor). NOC - runoff from application on slope.

Case#	**Y022 2005**	Designation	**PI**	License	**Commercial**	Date	**Jun-05**	Severity	**2**	Application Info	**Ground**
County	**Franklin**	Nature of Case	**drift to trees**			Response time	**same day**	Children Involved?	**no**	**Non Ag**	**Residential**
Chemicals Involved:	Herbicide glyphosate					Other Agencies	**none**	Final Action	**NOCs**	Target/Complaint Area	**ROW/trees**

Herbicide damage to trees. / Glyphosate symptoms, no source found. NOCs on license and records.

WSDA 2005 Case Data

Case# **Y023 2005**	Designation **PI**	License **Commercial**	Date **7/1/2005**	Severity **1**	Application Info	**Air**
County **Kittitas**	Nature of Case **drift to crop**		Response time **same day**	Children Involved? **no**	**Ag**	**Agriculture**
Chemicals Involved: Herbicide 2,4-D	Herbicide dicamba		Other Agencies **Food Safety**	Final Action **Advisory letter**	Target/Complaint Area	**grass/potatoes**

Application to Sudan grass drifted on potato fields. / Symptoms, no residue detected. No economic loss.

Case# **Y024 2005**	Designation **PI**	License **Unlicensed**	Date **7/6/2005**	Severity **3**	Application Info	**NA**
County **Klickitat**	Nature of Case **drift to crop**		Response time **same day**	Children Involved? **no**	**Ag**	**Residential**
Chemicals Involved: Herbicide glyphosate			Other Agencies **none**	Final Action **NOI**	Target/Complaint Area	**wine grapes**

Herbicide injury to wine grapes. / Verified. Misapplication direct to crop in violation of label.

Case# **Y025 2005**	Designation **PI**	License **Commercial**	Date **7/5/2005**	Severity **1**	Application Info	**NA**
County **Yakima**	Nature of Case **storage/human exposure -odor**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Commercial**
Chemicals Involved: unknown Unknown			Other Agencies **DOH/DOE**	Final Action **NAI**	Target/Complaint Area	**odor**

Odor from where chemical spray company parking trucks making him ill. / No violations seen.

Case# **Y026 2005**	Designation **PI**	License **Unlicensed**	Date **Summer 20**	Severity **4**	Application Info	**Ground**
County **Benton**	Nature of Case **misuse**		Response time **one day**	Children Involved? **no**	**Non Ag**	**Agriculture**
Chemicals Involved: Herbicide picloram			Other Agencies **none**	Final Action **NOI**	Target/Complaint Area	**weeds/trees**

Neighbor used herbicide along fence line and trees dying. / Verified. Homeowner used RUP brought from brother's house. RUP and use off label. Not licensed.

Case# **Y027 2005**	Designation **PI**	License **Unlicensed**	Date **7/14/2005**	Severity **2**	Application Info	**Ground**
County **Walla Walla**	Nature of Case **drift to garden**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Residential**
Chemicals Involved: Herbicide diquat			Other Agencies **Sheriff**	Final Action **NOC**	Target/Complaint Area	**weeds/garden**

Neighbor used herbicide and drifted or sprayed her garden. / Verified. Warrant needed to access property.

WSDA 2005 Case Data

Case#	Y028 2005	Designation	PI	License	unknown	Date	5/18/2005	Severity	0	Application Info	Unknown
County	Benton	Nature of Case	drift to potatoes			Response time	same day	Children Involved?	no	Ag	Commercial
Chemicals Involved:	unknown unknown					Other Agencies	none	Final Action	NAI	Target/Complaint Area	potatoes

Drift to potatoes. / Complainant withdrew complaint.

Case#	Y029 2005	Designation	PI	License	Commercial	Date	8/3/2005	Severity	1	Application Info	Unknown
County	Columbia	Nature of Case	human exposure -drift			Response time	one day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	unknown unknown					Other Agencies	none	Final Action	NAI	Target/Complaint Area	house/person

Felt ill from pesticide application to home across street. / Spoke to applicator and withdrew complaint.

Case#	Y030 2005	Designation	PI	License	Commercial	Date	8/29/2005	Severity	1	Application Info	Ground
County	Yakima	Nature of Case	misuse			Response time	same day	Children Involved?	no	Non Ag	Residential
Chemicals Involved:	Herbicide glyphosate					Other Agencies	none	Final Action	NAI	Target/Complaint Area	lawn/ornamentals

Application made by commercial applicator to lawn damaged trees. / Residue found was herbicide used by complainant.

Case#	Y031 2005	Designation	PI	License	Private Applicator	Date	8/11/2005	Severity	2	Application Info	Ground
County	Yakima	Nature of Case	drift to property			Response time	same day	Children Involved?	no	Ag	SPI
Chemicals Involved:	Insecticide azinphos methyl					Other Agencies	none	Final Action	NOC	Target/Complaint Area	apples/property

Application to apples drift on property, cars. / Verified. Residue found off target. No health complaints.

Case#	Y032 2005	Designation	PI	License	Private Applicator	Date	8/17/2005	Severity	2	Application Info	Ground
County	Yakima	Nature of Case	drift to day care			Response time	same day	Children Involved?	yes	Ag	Residential
Chemicals Involved:	Insecticide fenpyroximate					Other Agencies	none	Final Action	NOC	Target/Complaint Area	hops/day care center

Application to hops drifted on day care center property. / Verified. Residue found. No health symptoms claimed by complainant.

WSDA 2005 Case Data

Case# **Y033 2005**	Designation **PNI**	License **unknown**	Date **unknown**	Severity **0**	Application Info **NA**	
County **Walla Walla**	Nature of Case **direct to property**		Response time **same day**	Children Involved? **no**	**Ag**	**Commercial**
Chemicals Involved: N A NA			Other Agencies **EPA, Sheriff**	Final Action **NAI**	Target/Complaint Area **property**	

Homeowner said agricultural aircraft had leaking nozzles and flew over home and damaged trees. / No evidence of herbicide injury. Trees stressed from drought.

Case# **Y034 2005**	Designation **PNI**	License **Unlicensed**	Date **5/27/2005**	Severity **0**	Application Info **Ground**	
County **Kittitas**	Nature of Case **misuse**		Response time **same day**	Children Involved? **no**	**Non Ag**	**Residential**
Chemicals Involved: N A NA			Other Agencies **DOE**	Final Action **NAI**	Target/Complaint Area **fence**	

Using diesel fuel on fence. / Application not being used as a pesticide, no impact to environment or persons or property. No jurisdiction.

Case# **Y035 2005**	Designation **PI**	License **Private Applicator**	Date **unknown**	Severity **4**	Application Info **NA**	
County **Yakima**	Nature of Case **disposal**		Response time **same day**	Children Involved? **no**	**Ag**	**Residential**
Chemicals Involved: Miscellaneous Miscellaneous			Other Agencies **DOE**	Final Action **NOI**	Target/Complaint Area **disposal**	

Company improperly disposing of pesticides by burial. / Verified.

Case# **Y036 2005**	Designation **PI**	License **Unknown**	Date **Aug-05**	Severity **1**	Application Info **Unknown**	
County **Benton**	Nature of Case **drift to pasture**		Response time **two days**	Children Involved? **no**	**Non Ag**	**Commercial**
Chemicals Involved: Herbicide Miscellaneous			Other Agencies **none**	Final Action **NOC**	Target/Complaint Area **pasture**	

Neighbor sprayed herbicide and drifted to property and damaged pasture. / Residues of several herbicides found. No source determined. NOCs on records.

Washington State Department of Ecology, Spill Program

Department of Ecology Summary of Spill Program Pesticide-Related Complaints – 2005								
City, ERTS#	**Incident Date, Received Date**	**Medium, Waterway**	**Material, Quantity**	**Source**	**Cause**	**Impact**	**Action**	**Narrative**
Benton								
548296, Kennewick	5/12/2005, 5/12/2005	Air	Pesticide	Transportation-Vehicle/Truck	Unknown	Unknown	Referral	Pesticide spray drift complaint was referred to WSDA.
550653, Kennewick	9/10/2005, 9/10/2005	Roadway, paved	Pesticide 5-7 gallons	Transportation Vehicle/Truck	Accident-traffic	Contaminated roadway/ parking lot	Telephone-technical assistance	Vehicle was struck by another vehicle, rolled and leaked mixed Dursban 50. City personnel cleaned up the area, including a contaminated drywell.
Chelan								
547923, Leavenworth	5/3/2005, 5/3/2005	Surface water, fresh	Pesticide	Construction site	Human factor-improper procedures	Unknown	Telephone-technical assistance	Worker sprayed Roundup on acreage with wetlands to plant soil-draining grasses. DOE did not enforce action, as wetland plants and hydrology would easily

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								return.
551200, Leavenworth	10/11/2005 10/14/2005	Other	Herbicide	Commercial	Human factor-intentional	Human	Referral and requested information	Received 3 complaints about drift, overspray and chemical sensitivity.
551285, Cashmere	7/27/2005, 7/27/2005	Soil	Herbicide	Domestic	Human factor-improper procedures	Soil Contamination	Referral	Referred to WSDA who said it was OK for neighbor to spray.
Clark								
547405, Vancouver	4/12/2005, 4/12/2005	Soil, Roadway, paved	Pesticide, 5 containers	Motor vehicle-car	Accident-traffic	Soil Contamination	Referral and Telephone-technical assistance	No narrative
550697, Vancouver	9/20/2005, 9/20/2005	Roadway, paved	Pesticide, 10 gallons	Other	Human factor-improper procedures	Contaminated roadway/ parking lot	Field response, technical assistance	Pesticide spilled at intersection. Public Works and Fire Dept. used sorbent material and street sweeper to clean up spill.
Columbia								
548469, Dayton	5/26/2005, 5/31/2005	Air	Pesticide	Burn, open	Human factor, intentional	Air pollution	Field response, investigation	Man went to hospital with throat irritation from pesticide container burn.

Department of Ecology Summary of Spill Program Pesticide-Related Complaints – 2005								
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549765, Dayton	8/4/2005, 8/4/2005	Air	Pesticide	Commercial	Human factor-improper procedures	Air pollution	Telephone	Complaint was formally withdrawn when person was contacted.
Cowlitz								
548347, Ariel	5/24/2005, 5/24/2005	Surface water, fresh	Herbicide, 1 quart	Public agency	Operator error	Water pollution	Email, telephone	Fish hatchery staff spilled a bottle of herbicide onto asphalt and into pond leading into Lewis River. Any product that reached the river would be very dilute.
549540, Kalama	Unknown, 7/25/2005	Surface water, fresh	Herbicide	Public agency	Human factor-intentional	Water pollution	Email	Case had no indication of any spraying into water. WSDA reqested spray records from county.
Douglas								
550801, East Wenatchee	Unknown, 9/16/2005	Soil		Commercial	Unknown	Soil Contamination	No follow up needed	
Ferry								
547963,	5/6/2005,	Surface water,	Insecticide		Human	Natural	Field	Backpack

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Curlew	5/6/2005	fresh, Kettle River			factor, misconduct	resource damage	response, investigation and referral	spraying close to, but not in water. WSDA investigated.
Grant								
549498, Moses Lake	7/21/2005, 7/21/2005	Air	Pesticide	Commercial	Human factor-improper procedures	Air pollution	Field response, investigation	Investigation resulted in notice of correction to responsible party.
Grays Harbor								
546298, Montesano	2/12/2005, 2/12/2005	Soil	Herbicide, 40 gallons	Farm/agriculture	Human factor-improper procedures	Soil contamination	Field response, technical assistance	A neighbor reported two rusted and leaking drums of “dinoseb” on adjacent property. Responders packaged and secured the drums. A contractor removed materials from the site.
Island								
548362, Whidbey Island	5/25/2005, 5/25/2005	Surface water, fresh/wetland		Domestic	Human factor-intentional	Natural resource damage	No follow up needed	

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Okanogan								
546410, Tonasket	7/23/2004, 2/18/2005	Air	Pesticide	Farm/agriculture	Human factor-improper procedures	Air pollution	Telephone	
549100, Conconully	Unknown, 6/10/2005	Soil	Pesticide	Unknown	Fire	Soil contamination	TCP Determination	A release occurred at this site, but no longer poses a threat to human environmental health.
Pacific								
549082, Heather	6/22/2005, 6/29/2005	Public road, right-of-way	Herbicide, 5 gallon	Farm/agriculture	Natural phenomenon	Human	Telephone – technical assistance	No narrative
549149, Ilwaco	7/1/2005, 7/1/2005	Surface water-marine	Herbicide, Petroleum-gasoline-sheen	Vessel-other	Human factor-misconduct	Water pollution	Telephone-technical assistance	Airboat carrying 6 persons, petroleum, and aquatic herbicide sank at Willapa Bay NWR. Professional divers recovered the boat. Minimal gasoline leakage occurred.
550476,	Unknown,	Surface water-		Unknown	Unknown	Potential	No follow up	

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Willapa	9/7/2005	fresh				pollution/release	needed	
Pierce								
546965, Tacoma	3/22/2005, 3/22/2005	Building/structure	Pesticide	Public agency	Accident-other	Human	Telephone	No narrative
547112, Sumner	3/28/2005, 3/28/2005	Surface water-fresh	Herbicide	Farm/agriculture	Human factor-intentional	Potential pollution/release	Referral	Investigators were unable to determine whether herbicide application had been made or caused damage to complainant's property.
Skagit								
547833, Mount Vernon	4/29/2005, 4/29/2005	Surface water-fresh	Pesticide	Domestic	Improper procedure	Natural resource damage	Email and Telephone	A wetlands specialist notified the city of a land parcel with wetland areas that appeared to have been sprayed with roundup. Mount Vernon officials found no wetlands there and thus no violations.
Snohomish								

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551148, Arlington	Unknown, 10/7/2005	Ditch	Pesticide	Commercial	Improper procedure	Potential pollution/release	Field response, investigation, TCP – Determination	Site investigation found no misuse of pesticides. High levels of nutrients in surface water appear to be an application, USDA or surface water issue.
Stevens								
549960, Hunters	6/13/2005, 6/13/2005	Surface water-fresh	Insecticide, manure	Commercial	Human factor-negligence	Natural resource damage	Field response-investigation	Investigator visited feedlot and referred case to Stevens County Conservation District.
Thurston								
548989, Olympia	6/17/2005, 6/17/2005	Surface water-fresh Long Lake	Herbicide	Domestic	Improper procedure	Water pollution	Email	A complaint of possible herbicide application in Long Lake was referred to WSDA.1
Walla Walla								
547447,	4/12/2005,	Ground water	Pesticide	Commercial	Human	Ground water	Field	Case involving

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College Place	4/12/2005				factor-incompetence	contamination	response-investigation	a dead bird was referred to WSDA. The investigation found no illegal activity.
Whatcom								
550003, Bellingham	Unknown, 8/15/2005	Surface water, fresh Unnamed creek	Herbicide	Logging/timber	Human factor-other	Water pollution	Telephone	Contractor sprayed along creek, but failed to mark boundaries to protect live waters. It was recommended that the stream be listed for salmonid presence and generate a larger buffer from road.
550006, Bellingham	Unknown, 8/16/2005	Surface water, fresh Fazon Lake	Herbicide	Domestic	Improper procedure	Potential pollution/release	Telephone-technical assistance	Neighbors complained about a neighbor overspraying herbicide on wetlands. Later investigation could not find

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								significant violations or chemical residues. Applicator was told he must acquire an Aquatic Pesticide permit.
550292, Everson	8/28/2005, 8/28/2005	Surface water-fresh	Herbicide	Domestic	Human factor-other	Water pollution	Telephone	Investigator gave advice to call local health and Whatcom County Surface Water.
Whitman								
547314, Pullman	4/7/2005, 4/8/2005	Bridge	Herbicide	Transportation-rail	Human factor-intentional	Water pollution	Referral	Investigator contacted WSDOT for info on their herbicide policies and for railway contact name.
548773, Palouse	6/16/2005, 6/16/2005	Air		Commercial	Human factor, intentional	Potential pollution/release	No follow up needed	
Yakima								
546113, Grandview	1/26/2005, 1/26/2005	Air	Pesticide	Commercial	Fire	Air pollution	Field response-	Chemical fire at Wilbur Ellis

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							technical assistance and TCP-voluntary compliance	required emergency/EPA response and START air monitoring. Site received a No Further Action determination thru TCP Voluntary Cleanup Program.
547084, Mabton	3/7/2005 3/28/2005	Surface water-fresh	Pesticide	Commercial	Human factor-improper procedures	Water pollution	Telephone-technical assistance	Site is irrigation pond for Northwest Horticulture. There was no known pesticide use.
547713, Harrah	4/25/2005, 4/25/2005	Surface water-fresh, Irrigation	Pesticide 30-200 gallons	Commercial	Accident-traffic	Water pollution	Telephone	Accident caused a truck carrying pesticide to leak 30-200 gallons into nearby drainage ditch. Wapato Irrigation District, Yakama Nation and EPA were

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								notified.
548687, Yakima	6/8/2005, 6/9/2005	Surface water-fresh	Herbicide	Domestic	Human factor-improper procedures	Water pollution	Telephone-technical assistance, Field response-investigation	Neighbor sprayed Roundup in irrigation ditch on other neighbor's property. She was informed of requirement of license and permit for spraying.
548797, Yakima	4/27/2005, 4/27/2005	Air	Pesticide	Farm/agriculture	Fire	Air pollution	Field response-investigation	Shed fire occurred at orchard, shed contents unknown. Fire dept used high expansion foam to reduce smoke. Local agencies notified for health impacts from smoke and soil remediation.
549886, Zillah	8/2/2005, 8/2/2005	Roadway, paved	Pesticide	Commercial	Unknown	Unknown	Field response-investigation	Six bags of Acramite were found near

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								Yakima River. Most bags were opened and contents scattered. Debris picked up and properly disposed of.

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Washington State Department of Health Agency Data Summary

Case	Exposure Date	Incident Description
050004	01/05/2005	A 48-year-old female went to ER with upper respiratory symptoms caused by inhalation of mist from the fogger that she set off and then did not leave the area. Patient was discharged with treatment for asthma exacerbation. Unknown: Cypermethrin (ANSI) 1 Definite Severity: Low/Mild
050005	01/10/2005	A parent was applying topical flea treatment to his dog's back. When he pressed on the tube it squirted into his 9-year-old daughter's eye. She had ocular symptoms. Insecticide (excluding solely IGR and fumigants): Imidacloprid 1 Definite Severity: Low/Mild
050006	01/13/2005	A 22-year-old female was leaning over to apply boric acid powder under her kitchen counters. She inhaled some of the product. She became anxious and then experienced increasing respiratory symptoms. She called WPC, said she has asthma and used her nebulizer. After two hours the symptoms resolved. Insecticide (excluding solely IGR and fumigants): Boric acid 1 Possible Severity: Low/Mild
050009	01/16/2005	A 4-year-old was playing with his siblings, ages 2 and 6. He climbed onto the kitchen counter, found a fogger and set it off. The children and their father were exposed to the mist and had respiratory symptoms. They all went outside. They called WPC for advice. Their symptoms cleared. Insecticide (excluding solely IGR and fumigants): Cypermethrin (ANSI) 4 Possible Severity: (4) Low/Mild
050010	01/17/2005	A 41-year-old female left her home as apartment manager applied an insecticide to control silverfish in the kitchen. She returned after seven hours and noticed the chemical smell. She became concerned when she touched brown liquid residue on her kitchen counter top. She experienced upper respiratory irritation, called WPC, took a hot shower, and began to feel better. Insecticide (excluding solely IGR and fumigants): Pyrethrins; Octyl bicycloheptene dicarboximide, N-; Piperonyl butoxide 1 Possible Severity: Low/Mild
050012	01/21/2005	A 90-year-old female reportedly sprayed an aerosol insecticide for 90 minutes for moth control in her basement. She later developed symptoms she feels were related. She washed, but her symptoms persisted. She went for medical treatment. Unknown: Miller Home 1 Possible Severity: Low/Mild
050013	01/22/2005	An 81-year-old male applied a 0.1% active ingredient insecticide to the inside of his home to control insects. The next day he developed a rash over his body. He also had just started taking an antibiotic for a sore throat. He went to an emergency room for treatment. His itching was controlled quickly but it took about three days for the rash to resolve. Insecticide (excluding solely IGR and fumigants): Cyfluthrin 1 Probable Severity: Low/Mild
050015	01/26/2005	A 34-year-old female reported using four flea foggers in her home and staying out of house for three to four hours. She returned and found her guinea pig had died. She spent some time in the home, but due to the smell she then spent the night at her mother's home. She complained of gastrointestinal and respiratory symptoms. She went to the hospital ER for evaluation. Insecticide: unknown class 1 Possible

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		Severity: Low/Mild
050016	01/23/2005	A 16 month old male and his brother were playing. He handled a granular herbicide and was found with granules around his face and mouth. It was not known if he ingested any. He was washed off. Later when he developed a body rash and some respiratory problems, he was taken to physician, who gave the mother Mr. Yuk stickers and talked about the dangers of household chemicals. The physician thought that the rash was viral in origin. Herbicide/algicide: Trifluralin (ANSI) 1 Probable Severity: Low/Mild
050017	02/01/2005	A 50-year-old male used a hose-end sprayer to apply a moss control product to the roof of his two story home. He did not wear required PPE (goggles and gloves). The spray came back into his face and eyes. He felt immediate eye irritation and came off the roof, his wife washed out his eyes and called WPC. The irritation decreased and was resolved by next day. Herbicide/algicide: Zinc chloride 1 Possible Severity: Low/Mild
050018	02/01/2005	A 51-year-old female reported symptoms following an application of Rid Lice Shampoo at a treatment center. Patient was wearing rubber gloves while applying product on a client's hair. She sought medical care and was released in stable condition. Unknown: Piperonyl butoxide, Pyrethrins 1 Possible Severity: Low/Mild
050019	02/01/2005	A 34-year-old male set off (lit) a rodenticide gas product. He breathed in an estimated five breaths. He reported several respiratory effects and called WPC. He returned an inquiry call and provided more information. He was still experiencing effects two to three days later. Rodenticide: Sulfur; Sodium Nitrate 1 Possible Severity: Low/Mild
050022	02/05/2005	A 6-year-old female was in the grocery store with her mother and pulled a container of insect repellent off the shelf. She removed the cap and pressed the dispenser button, spraying herself in the face. The child's mother immediately took her to a restroom and irrigated her eyes for about 20 minutes. She checked with store pharmacist and then called WPC. The symptoms cleared in about 30 minutes. Insect repellant: Diethyl-meta-toluamide and other isomers, N,N- 1 Definite Severity: Low/Mild
050023	02/05/2005	An adult couple, ages 39 and 41, poured moth balls into their attic to get rid of squirrels. They believe their subsequent symptoms were from the off-gassing of the naphthalene. They most of the product, then called WPC for advice. They reported the symptoms were diminishing. Insecticide (excluding solely IGR and fumigants): Naphthalene 2 Possible Severity: (2) Low/Mild
050025	02/10/2005	A 21-year-old male spilled a concentrated herbicide on his hands several times as he was adding the product to his sprinkler system. He washed his hands, but about an hour later, he developed a number of dermal signs related to skin sensitization. He called WPC, they recommended more decontamination, and application of Benedryl. Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate; Dicamba, dimethylamine salt; Triethylamine triclopyr 1 Possible

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		Severity: Low/Mild
050027	02/12/2005	An 80-year-old male apartment tenant was exposed when the pest control operator was spraying outside his apartment. He walked around a corner while the PCO was spraying and was sprayed in the face. He soon developed symptoms and called WPC. No other medical care was sought. Insecticide (excluding solely IGR and fumigants): Bifenthrin (ANSI) 1 Possible Severity: Low/Mild
050028	02/15/2005	A 41-year-old male agricultural worker went to the ER complaining of neurological and gastrointestinal symptoms following exposure to phosphine gas. No PPE worn, except rubber gloves. Patient was applying pellets to gopher holes in a field. Fumigant: Aluminum phosphide 1 Possible Severity: Low/Mild
050032	02/19/2005	A 36-year-old male homeowner said he was in a hurry, did not use gloves and the spray ricocheted onto his hands and wrist. He had dermal symptoms and rinsed thoroughly. He indicated that he would use gloves the next time he applied. Herbicide/algicide: Zinc chloride 1 Possible Severity: Low/Mild
050035	02/20/2005	A 37-year-old male health provider applied herbicides in the wind. He said he was in a hurry and neither read the label nor used any PPE. The next day he developed respiratory and neurological symptoms and sought medical care. He had concerns about the ingredients and label was provided to him by mail. Herbicide/algicide: Glyphosate, isopropylamine salt; Imazapyr, isopropylamine salt 1 Possible Severity: Low/Mild
050036	02/18/2005	A 4-year-old boy climbed on a propane tank two days after the house, deck and outbuilding were treated for moss. An hour or so later he complained of burning and itching on his bare arms. His mother called WPC who recommended washing and ice. The child napped and awoke feeling fine. Herbicide/algicide: Zinc chloride 1 Possible Severity: Low/Mild
050037	02/23/2005	A 64-year-old male did not read the label instructions and released an aerosol insecticide in his garage to control ants. The container was pointed directly at his face and he inhaled and swallowed some of the fog. He took the container outside. He developed respiratory symptoms. He called WPC but did not seek medical treatment. Within an hour he felt much better. Insecticide (excluding solely IGR and fumigants): Cypermethrin (ANSI) 1 Possible Severity: Low/Mild
050038	02/24/2005	A 78-year-old female spilled herbicide on her hands while applying to weeds in her lawn around her condo. She immediately washed. Three hours later she had swelling and itching. She called WPC, washed again and applied ice, then a cream to alleviate the itching. The itching lasted three days. Herbicide/algicide: Dicamba, dimethylamine salt; 2,4-dichlorophenoxyacetic acid; Mecoprop 1 Possible Severity: Low/Mild
050039	02/19/2005	A 26-year-old mother and her 10 month old daughter were in the bathroom of a motel room. The product had been applied after the mother identified an ant problem. The mother developed neurological, GI and respiratory problems. The mother contacted WPC. The label was not followed (ventilation).

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Case	Exposure Date	Incident Description
		Insecticide (excluding solely IGR and fumigants): limonene 2 Possible Severity: (2) Low/Mild
050040	02/22/2005	A 1-year-old female ingested approximately 1.5 cc of a miticide. The mother contacted the poison center and was advised to give child food and fluids. There was no harm anticipated from the ingestion. Nevertheless, the next day the infant had diarrhea. The child was not taken for medical treatment. Insecticide (excluding solely IGR and fumigants): Pyrethrins; Piperonyl butoxide 1 Possible Severity: Low/Mild
050042	02/28/2005	A 22-year-old female sprayed her cats and her bare feet with an aerosol flea spray. She immediately developed an itch. She washed with water only, called WPC, washed again, and went to bed. She awoke and the symptoms had almost resolved. Insecticide (excluding solely IGR and fumigants): Pyrethrins; Permethrin, mixed cis,trans (ANSI) 1 Possible Severity: Low/Mild
050043	03/01/2005	A 45-year-old female home owner developed ocular symptoms after she splashed herbicide in her eye. She did not seek medical treatment. Symptoms dissipated within approximately twelve hours. Herbicide/algicide: Glyphosate, isopropylamine salt 1 Possible Severity: Low/Mild
050045	03/02/2005	A 36-year-old female applied a flea insecticide to her dog, then sniffed the dog's fur and contacted the insecticide with her lips and face. She reported irritation around her mouth and immediately called WPC. She washed her face well with soap and water. Later the same day, the irritation resolved. Insecticide (excluding solely IGR and fumigants): Imidacloprid 1 Possible Severity: Low/Mild
050046	03/02/2005	A 33-year-old female set off three flea bombs in a small apartment, left for two hours, returned to ventilate and clean, then slept on the couch for two hours. She awoke with respiratory, GI and neurological symptoms. She works in a hospital and was monitored by the staff at the hospital. She did not work the next day due to symptoms. Educational material was provided. Insecticide (excluding solely IGR and fumigants): Cypermethrin (ANSI) 1 Possible Severity: Low/Mild
050047	03/03/2005	A family of three, ages 41, 20 and 17, lived above an office where an application was made. They could smell and taste the products and two of them had respiratory, gastrointestinal, neurological and ocular symptoms. They had not been notified of the application. Insecticide (excluding solely IGR and fumigants): Piperonyl butoxide; Linalool Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Methoprene 2 Possible Severity: (2) Low/Mild
050048	03/04/2005	A 52-year-old homeowner reported an ocular exposure to WPC. The patient was filling the sprayer when it accidentally splashed into his eyes. He was not wearing eye protection. No medical care was sought. Herbicide/algicide: Pendimethalin (ANSI) 1 Possible Severity: Low/Mild

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Case	Exposure Date	Incident Description
050049	03/05/2005	A 32-year-old female used a crack and crevice insecticide to spray for insects. As she walked around her home outside, she walked in and out of the spray mist. The spraying took place around 10:30 PM. When she awoke the next day she had a general rash on her arms, legs, and upper chest. She washed off and called WPC. No other medical care was sought. Insecticide (excluding solely IGR and fumigants): Methyl-4-oxo-3-(2-propenyl)-2-cyclopenten-1-yl d- trans-2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate, 2-; Tralomethrin (ANSI) 1 Possible Severity: Low/Mild
050050	02/12/2005	A 40-year-old licensed applicator applied a mixture of iron, fertilizer and an insecticide. The pressure line from the pump, split at the spray gun and sprayed directly into his right eye. He was not wearing eye protection and didn't thoroughly decontaminate his eye. He didn't have an exam until 2/21/2005 when his eye was still having irritation and discharge. He was treated and released for work. Insecticide (excluding solely IGR and fumigants): Carbaryl (ANSI) 1 Probable Severity: Low/Mild
050051	02/03/2005	A 31-year-old female office worker went into the office restroom immediately after it was treated for gnats. There was no placard posted. She developed upper respiratory symptoms within two to four minutes. She went to an ER where she was evaluated, treated and released. The need to post after pesticide applications and PCO timing was discussed with human resources. Insecticide (excluding solely IGR and fumigants): Cyfluthrin, Methyl-4-oxo-3-(2-propenyl)-2- cyclopenten-1-yl d-trans-2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate, 2-; Pyrethrins; Octyl bicycloheptene dicarboximide, N-; Piperonyl butoxide 1 Probable Severity: Low/Mild
050052	02/02/2005	A landscaper applied an herbicide around an office building. The next day a 24-year-old female worker came in and worked from 7:30 AM until 11:00 AM. She developed respiratory problems believed to be related to the smell of the herbicide used around the building. She went in for medical treatment, being asthmatic and recently recovering from upper respiratory condition. Herbicide/algicide: Dichlobenil (ANSI), Trifluralin (ANSI); Isoxaben (ANSI) 1 Probable Severity: Low/Mild
050054	03/07/2005	A 46-year-old male was helping his neighbor treat his property with moss control. He got some chemical in his eye and immediately rinsed. His eye was irritated and he sought medical treatment. He was diagnosed with chemical conjunctivitis. Herbicide/algicide: Ferric sulfate 1 Definite Severity: Moderate
050055	03/09/2005	3-year-old twin boys went into a storage building left open by their older brother. The toddlers played with a shaker container of granular herbicide. One child had a possible allergic dermatitis reaction. The mother called WPC for decontamination instructions. Two days later the exposure had ceased itching but still showed redness. Herbicide/algicide: Trifluralin (ANSI) 1 Possible Severity: Low/Mild
050056	03/08/2005	At about 5 pm, a 45-year-old female applied a slug bait around her garden area by shaking the contents out of the packaging. Unexpectably, the wind blew the chemical into her face. She inhaled it and tasted it. She had some redness around her mouth, throat irritation and a headache. Around 2 am she called WPC,

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		consulted and went to bed and awoke feeling symptoms had diminished. Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Metaldehyde 1 Possible Severity: Low/Mild
050057	03/13/2005	A 63-year-old male licensed pesticide applicator developed ocular symptoms when an undetermined amount of pesticide hit his eye. He was not wearing eye protection. He was spraying around his home. He sought medical treatment the same day and he was discharged with his eye patched. Insecticide (excluding solely IGR and fumigants): Cyfluthrin 1 Definite Severity: Low/Mild
050058	03/10/2005	A 24-year-old female was picking up four foggers in the basement of her home. She believed that her husband had set them off three hours before. She began to have respiratory problems and sought medical care later that day. Two foggers would have been adequate for the cubic feet (10,000). Education was provided to avoid future adverse health effects. Insecticide and other: Permethrin, mixed cis,trans (ANSI); Methoprene, S- 1 Possible Severity: Low/Mild
050059	03/12/2005	A 42-year-old female was applying granular slug bait around her home and garden when a wind suddenly whipped the dusty granular material into her face. At the same time the wind blew the product onto her 7-year-old daughter who was standing around the corner. They had symptoms, showered, and called WPC. Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Metaldehyde 2 Possible Severity: (2) Low/Mild
050060	03/12/2005	An adult male applied a moss control product to his lawn with a sprayer. He received an exposure to his eye. He rinsed it, had irritation and discomfort, and then his wife called WPC. Several calls made to contact this person were unfruitful. Unknown: Ferric sulfate 1 Possible Severity: Low/Mild
050061	03/11/2005	A 41-year-old female applied a ready-to-use weed control product with a trigger pump for about 15 minutes. There was no known contact with the chemical, except the chemical odor. She experienced respiratory and neurological symptoms and called WPC the following day. Herbicide/algicide: Glyphosate, isopropylamine salt; Oxyfluorfen (ANSI) 1 Possible Severity: Low/Mild
050062	03/13/2005	A 27-year-old female developed ocular symptoms when insecticide dropped in her eye. She did not seek medical treatment. She was wearing rubber gloves but not eye protection. The label does not require the use of PPE. Insecticide (excluding solely IGR and fumigants): Lambda-cyhalothrin 1 Possible Severity: Low/Mild
050063	03/14/2005	A 55-year-old female's eye was exposed while her friend was applying a 1 ml. container of flea insecticide to her cat. The container flew out of her friend's hands and squirted material in her eye. She washed her eye and called WPC. Her eye was very irritated, so the next day she saw a physician. When called, this individual declined any more information and requested no contact. Insecticide (excluding solely IGR and fumigants): Imidacloprid 1 Possible

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		Severity: Low/Mild
050064	03/15/2005	A 59-year-old female medical social worker and her 80-year-old female client developed dermal, ocular and respiratory symptoms after exposure to moth balls in client's home. The worker did not seek medical attention. The client did not smell the moth balls; however the social worker observed redness in the client's face. The client could not remember when the event occurred but did recall placing the moth balls between her room and the bathroom. Unknown: Naphthalene 2 Possible Severity: (2) Low/Mild
050065	03/16/2005	A 41-year-old female described being sprayed several times by the maintenance manger at a mobile home park. She developed dermal and ocular symptoms and sought medical care. WSDA investigated. Herbicide/algicide: Glyphosate, isopropylamine salt 1 Possible Severity: Moderate
050066	03/20/2005	A 76-year-old male was drifted with a pesticide while working with animals in his yard. He developed gastrointestinal and neurological symptoms the same day. WSDA samples from his yard were positive for residues of the pesticide being applied in the area. Herbicide and Fungicide (03 & 04): Copper hydroxide Insecticide (excluding solely IGR and fumigants): Petroleum distillate, oils, solvent, or hydrocarbons; also paraffinic hydrocarbons, aliphatic hydrocarbons, paraffinic oil Insecticide and other: Diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate, O,O- 1 Probable Severity: Moderate
050067	03/10/2005	A 48-year-old disabled male described being around lice at friends' home and when transporting his friend. He said he used five cans of the Rid product over a seven to ten day period. He slept on the bedding he sprayed and had neurological, dermal, gastrointestinal and respiratory symptoms. He did not seek medical care. Unknown: Permethrin, mixed cis,trans (ANSI) 1 Possible Severity: Low/Mild
050068	03/17/2005	A 30-year-old female splashed her eye with insecticide when trying to open the 1.34 ml. container. The plastic was bent over as described on the packaging. She washed her irritated eye immediately. She called WPC, mixed a sink of saline solution and irrigated her eye more. She rested for an hour and began to feel better as the irritation resolved. Insecticide (excluding solely IGR and fumigants): Methoprene, S-; Fipronil 1 Possible Severity: Low/Mild
050069	03/19/2005	A 61-year-old female condo owner hired a PCO to treat her home when she found roaches. She stayed out of the home for approximately nine hours that day. She returned at 10:00 p.m. and opened windows for ventilation as directed. The next day she noticed some odor, turned up the heat, and by 9:30 p.m. that evening, reported feeling upper respiratory effects. She showered and the next day the only remaining symptom was hoarseness. Insect Growth Regulator (IGR): Hydroprene, (7S)- Insecticide (excluding solely IGR and fumigants): Bifenthrin (ANSI), Orthoboric Acid, Fipronil 1 Possible Severity: Low/Mild
050071	03/21/2005	A 31-year-old mother removed her children from the living room when she found beetles under her sofa. She sprayed insecticide around the base board and under the sofa. She started having upper respiratory irritation. It appeared to have been

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		an allergic response. She called WPC for consult. Insecticide (excluding solely IGR and fumigants): Permethrin, mixed cis,trans (ANSI); Tetramethrin (ANSI) 1 Possible Severity: Low/Mild
050073	03/09/2005	A 36-year-old male sprayed for hornets outside of his home for about an hour. He reported inhaling spray from the application. He had upper respiratory symptoms that took perhaps a month to run its course. He did not see medical attention, but after two weeks of coughing, his wife called WPC. Insecticide (excluding solely IGR and fumigants): Methyl-4-oxo-3-(2-propenyl)-2-cyclopenten-1-yl d- trans-2,2-dimethyl-3-(2-methyl-1-propenyl) cyclopropanecarboxylate, 2-; Tralomethrin (ANSI) 1 Possible Severity: Low/Mild
050074	03/22/2005	A 71-year-old female applied an herbicide from a one gallon hand sprayer. The nozzle popped off and a solid stream of solution hit her in the face/mouth/eye. She said she panicked, washed noticed tingling around mouth and eye irritation. She then called WPC, washed again, rested with herself, and eyes closed, and reported feeling a little improvement after approximately three hours. Herbicide/algicide: Glufosinate-ammonium 1 Possible Severity: Low/Mild
050075	03/23/2005	A 69-year-old female gardener used a hose end sprayer on her roses. The gasket was worn causing the liquid fungicide to spray in her eyes. She did not wear eye protection. She immediately tried to rinse her eyes but after a few minutes sought medical treatment at a local ER. They treated her and found light perforations on her eye. Fungicide: Triforine (ANSI) 1 Definite Severity: Low/Mild
050076	03/18/2005	A 31-year-old father, a 31-year-old mother, their 4-year-old daughter and 7 month old old son were drifted by a ground spray application while riding in their car on the road. The family had gastrointestinal, dermal and respiratory symptoms. The 7 month old infant was taken to the ER with a fever and respiratory symptoms. He was treated again two days later at a clinic for gastrointestinal symptoms. WSDA tests were positive for pesticide residues on the car. WSDA determined that the orchard application was negligent and contrary to label directions. Insecticide (excluding solely IGR and fumigants): Diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate, O,O-, Mineral oil - includes paraffin oil from 063503 4 Probable Severity: Low/Mild Severity: Low/Mild Severity: Moderate Severity: Moderate
050077	03/23/2005	A 49-year-old male vegetation management supervisor/city employee was taking inventory in a chemical storage room and decided to relocate some 2.5 gallon containers improperly stored on the top shelf. When he reached up to move a container of herbicidal desiccant, the lid was missing and the product spilled into his face. He swallowed some of the product. He immediately took a full body shower and was taken for medical care. He was hospitalized the next day due to progressive respiratory and gastrointestinal symptoms. He was discharged after ten days. DOH provided resources to the health care providers and L&I conducted an inspection. Herbicide/algicide: Diquat dibromide 1 Definite

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		Severity: High/Severe
050078	03/24/2005	A 38-year-old male used a hose end sprayer to apply a moss control product. He thought the application container was on tight. However it came loose and fell off, and the contents splashed up into his face. Herbicide/algicide: Zinc chloride 1 Definite Severity: Low/Mild
050079	03/24/2005	The exposed person was a 29/yo male gardener/landscaper. He was applying a granular moss control product by means of a hand-held rotary dispenser. The wind blew some dust and granular material into his face. He inhaled some of the material, which caused ocular irritation and respiratory difficulty. His wife called WPC. He did not seek medical attention. Herbicide and Fungicide (03 & 04): Ferrous sulfate monohydrate 1 Possible Severity: Low/Mild
050080	03/25/2005	A 49-year-old male applied a granular insecticide/fertilizer. The wind blew the product into his eye. He was not wearing eye protection. He washed his eye for ten minutes and went to eye clinic for persisting discomfort. A physician removed some granular material from his eye and treated it. Herbicide/algicide: Ferrous sulfate monohydrate 1 Definite Severity: Low/Mild
050082	02/07/2005	A 58-year-old female employee and licensed applicator wearing more than the label required PPE, finished a few hours of applying an herbicide. She had no recall of direct or spray contact. Later she noticed that her face and neck were red. She showered and the next day went for medical attention. It is thought she had an allergic reaction. Herbicide/algicide: Glyphosate, isopropylamine salt 1 Definite Severity: Low/Mild
050083	03/31/2005	A 4-year-old female was found with a bottle missing two to three ounces of flea and tick shampoo. She had shampoo on her breath, around her mouth and in her left eye. Her left eye was twitching. She was immediately bathed. WPC was called from the hospital ER. The doctor noticed some irritation but the majority of exam was unremarkable. Insecticide (excluding solely IGR and fumigants): Pyrethrins; Piperonyl butoxide; N-octylbicycloheptene dicarboximide 1 Definite Severity: Low/Mild
050085	03/04/2005	A 61-year-old male applicator had ocular and neurological symptoms after applying with an air blast sprayer. He could feel the spray on his neck and face but did not feel it in his eyes. He wore a hooded sweatshirt to absorb the pesticides hitting his plastic vest. He wore safety glasses but not goggles. He sought medical care the next day. He was enrolled in the cholinesterase monitoring program and ten days later his RBC cholinesterase test result showed depression of more than 20% of baseline. A month later, both the RBC and serum ChE were still depressed. Insecticide (excluding solely IGR and fumigants): Petroleum distillate, oils, solvent, or hydrocarbons; also paraffinic hydrocarbons, aliphatic hydrocarbons, paraffinic oil Insecticide and fungicide (1 and 4): Sulfur Insecticide and other: Diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate, O,O- 1 Definite Severity: Low/Mild
050087	04/03/2005	A relative called WPC reporting that a 2.5-year-old male got a drop of flea control product in his eye. The child developed eye irritation and the eye was irrigated. DOH called the child's parents for follow-up and they declined to return the calls.

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		Insecticide (excluding solely IGR and fumigants): Permethrin, mixed cis,trans (ANSI) 1 Possible Severity: Low/Mild
050092	03/24/2005	A 37-year-old male maintenance worker was putting on a backpack sprayer when the pesticide in the tank spilled out and down his back. He developed dermal discomfort and irritation believed to be related to the contact. He sought medical care and the doctor gave diagnosis of chemical dermatitis. Herbicide/algicide: Glyphosate, isopropylamine salt 1 Probable Severity: Low/Mild
050097	04/14/2005	A 54-year-old female (home owner) developed neurological, gastrointestinal and respiratory symptoms. For two hours she was close to an application of herbicide to her lawn at her home. She later worked on the grass and she had dermal contact (with the grass with her hands and knees). She sought medical treatment five days later. Herbicide/algicide: Dithiopyr, Dicamba, dimethylamine salt; Triethylamine triclopyr; MCPA, dimethylamine salt 1 Possible Severity: Low/Mild
050099	04/17/2005 Severity	A 21-year-old male applicator developed a second degree burn, other dermal symptoms and gastrointestinal symptoms after spraying a corrosive pesticide. He was wearing full PPE. However, he said there were windy conditions. He was spraying with a hand-gun and felt the spray hit his mask and roll to his chin. He started having burning sensation and itching. He sought medical treatment the next day. He did not want to refer the incident to an enforcement agency. Insecticide and fungicide (1 and 4): Calcium polysulfide 1 Definite Severity: Moderate
050101	04/19/2005	A 31-year-old male applicator had first degree burns after opening a 250 gallon container under pressure. The product hit both his forearms. At first he had no burning sensation, but after washing, his arms began to burn and itch. He sought medical care that day. He was wearing full PPE, however, his gloves were not taped to the sleeves of his rain gear. Insecticide and fungicide (1 and 4): Calcium polysulfide 1 Definite Severity: Low/Mild
050102	04/09/2005 Severity	A 59-year-old male landscaper was cleaning and working around a burn pit when a swarm of mosquitoes came to him. He sprayed himself and the mosquitoes and accidentally got some spray in his right eye. After two days, his right eye was swollen shut, and he sought medical attention. Three days later, he had almost completely recovered. Insect repellant: Diethyl-meta-toluamide and other isomers, N,N- 1 Definite Severity: Moderate
050103	04/11/2005	A 24-year-old male spray applicator had gastrointestinal and neurological symptoms after spraying sulfur based fungicide with an air blast sprayer. He said that it was windy, he smelled the tank mix, and felt the pesticide droplets on his rain gear. He was wearing full PPE and sought medical care the day after the incident. Unknown: Petroleum distillate, oils, solvent, or hydrocarbons; also paraffinic hydrocarbons, aliphatic hydrocarbons, paraffinic oil, Calcium polysulfide 1 Possible Severity: Low/Mild
050104	04/23/2005	A 49-year-old male mixed a concentrate and made a ground spray application to weeds near his home. He did not use PPE and experienced neurological, ocular

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		and gastrointestinal symptoms. He sought medical care and said that in the future he would wear gloves and use respiratory protection as recommended. Herbicide: unknown chlorphenoxy 1 Possible Severity: Low/Mild
050105	04/21/2005	A 19-year-old male was helping his family prepare their garden area by applying herbicide to control weeds around the garden plot. The wind rose a few times, and he recalled he had eye contact. About two hours later he noticed eye irritation and burning. He went to the local ER for an evaluation. The next day he was fine. Herbicide/algicide: Glyphosate, isopropylamine salt 1 Definite Severity: Low/Mild
050106	04/28/2005 Severity	A 25-year-old male helped his grandmother clean out her garage. During the process he got his hand into a chemical. Very quickly it started to burn, so he washed his hands under running water and in doing so, transferred the chemical to the other hand. Both hands were burning; he called WPC and went to the ER. Fungicide: Calcium polysulfide 1 Definite Severity: Moderate
050107	04/08/2005	A 28-year-old female licensed city worker applied moss control to a fabric covering of a city historical structure. The chemical ran off the fabric into the gutter and over flowed onto her face. The next morning her face was red, irritated and broke out with a rash. A few days later she sought medical attention. It took about one week to clear up. Herbicide/algicide: Ferric sulfate 1 Definite Severity: Low/Mild
050109	04/29/2005	A 46-year-old male laborer was applying a granular moss control product to roofs on reservation housing. He wore latex gloves (only PPE). His eyes began to burn after he rubbed them. He may have had granules on his hands. He immediately washed his eyes and went to a clinic. His eyes were clear shortly after. Herbicide: unknown moss killer 1 Probable Severity: Low/Mild
050110	04/29/2005	A 27-year-old female applied an aerosol ant insecticide to control spiders by spraying the nest. Shortly afterward, she felt ill, and went for medical attention at an urgent care clinic. The clinic did not "see" any indication of illness but noted upper respiratory irritation. She stated the spray actually bounced off a glass door and came into her face. Insecticide (excluding solely IGR and fumigants): Pyrethrins; Piperonyl butoxide; Permethrin, mixed cis,trans (ANSI) 1 Possible Severity: Low/Mild
050111	05/04/2005	A 30-year-old male who loads seed potatoes into the potato planter developed neurological symptoms. He reported that he had lifted ten containers of aldicarb and one was open. He smelled the odor. He also had other medical problems. He declined to provide the name of his employer and did not want the case to be referred. His health care provider was not certain about the cause of his problems. Unknown: Aldicarb (ANSI) 1 Possible Severity: Low/Mild
050112	05/01/2005	A 65-year-old female used a hand/pump sprayer to treat moss in her lawn. The sprayer was leaking, her hands were wet with chemical and she inadvertently touched her face, hand and neck. Later in the day she noticed sensitivity, and the

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		next day the skin areas were red, burned and eventually peeled. About four days later she sought medical treatment. Herbicide/algicide: Ferric sulfate 1 Definite Severity: Low/Mild
050113	05/07/2005	A 25-year-old female homeowner used a commercial product in her home to control ants. The chemical splashed into her face while she was spraying in the bathroom. She later developed eye irritation and asked to be taken to the ER. She did not have eye protection and was wearing contacts. Her eye was irrigated and she was released. Insecticide (excluding solely IGR and fumigants): Cyfluthrin 1 Definite Severity: Low/Mild
050115	04/23/2005	A 46-year-old male licensed applicator was wearing full PPE except for protection to his neck. He had dermal symptoms in the exposed area within six hours after spraying. He sought medical care five days later. Disinfectant/broad spectrum for water sanitation: Mancozeb Insecticide (excluding solely IGR and fumigants): Bifenazate, Mineral oil - includes paraffin oil from 063503 1 Definite Severity: Low/Mild
050116	04/23/2005	A 40-year-old male farmworker is seen in a worker care clinic complaining of pruritic rash. The patient had been spraying with a mixture of products wearing the required PPE. He feels some of the spray penetrated the openings onto his neck. Patient received treatment for dermatitis due to chemical exposure. Disinfectant/broad spectrum for water sanitation: Mancozeb Herbicide/algicide: Ethephon (ANSI) Insecticide and other: Carbaryl (ANSI) Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Potassium 1- naphthaleneacetate 1 Definite Severity: Low/Mild
050117	04/27/2005	A 31-year-old male apple applicator developed respiratory symptoms after he sprayed a herbicide mixture for three days. He sought medical treatment the same day. He only smelled the pesticide. He was wearing rubber gloves and a dust mask. Herbicide/algicide: Glyphosate, isopropylamine salt, Chloro-4,6-bis(ethylamino)-s-triazine, 2- 1 Probable Severity: Low/Mild
050118	05/11/2005	A 58-year-old female homeowner was sitting on her porch when she observed a truck spraying weeds. She could smell the products and then had GI, respiratory, ocular and dermal symptoms. She sought medical care that day. WSDA took samples one week after the application was made. They were negative. Herbicide/algicide: Dicamba, diglycoamine salt 1 Possible Severity: Low/Mild
050119	05/13/2005	A 33-year-old male applicator went to a clinic complaining of neurological and gastrointestinal symptoms. These were possibly from an OP exposure while applying. The initial AChE lab results were within normal limits. He reported that he was using a loose fitting mask while spraying a tank mix. He was also directly sprayed in the face by another tractor driver moving up the opposite row. Fungicide: Trifloxystrobin Insecticide (excluding solely IGR and fumigants): Azinphos-Methyl 1 Possible

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	Severity	Severity: Moderate
050121	05/14/2005	A 46-year-old male farmer became ill following an application of Alachlor 4 EC herbicide. Patient was exposed at the end of the application when he took his gloves off to rinse the spray container. Some of the spray made contact with his hands. Patient sought medical care and received treatment for chemical burns. Herbicide/algicide: Alachlor (ANSI) 1 Definite Severity: Low/Mild
050122	04/09/2005	A 30-year-old male applicator developed dermal symptoms after spraying lime-sulfur. He said he felt the spray in open areas of his face/neck where the PPE did not cover, especially when he turned his head to make turns at end of the rows. Employer provided MSDS to his doctor. Insecticide and fungicide (1 and 4): Sulfur Unknown: Sulfur 1 Definite Severity: Low/Mild
050123	04/25/2005	A 54-year-old male private agricultural applicator reported a possible occupational exposure. He applied a mix of several chemicals wearing full PPE. After he went home he developed systemic symptoms. Fungicide: Triadimefon Herbicide/algicide: Ethephon (ANSI) Insecticide (excluding solely IGR and fumigants): Methoxyfenozide Insecticide and fungicide (1 and 4): Sulfur Insecticide and other: Carbaryl (ANSI) Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Potassium 1- naphthaleneacetate 1 Possible Severity: Low/Mild
050124	05/16/2005	An 8-year-old female inhaled vapors from chlorine tablets used for the swimming pool. She had GI and respiratory symptoms and was taken by ambulance for medical care. DOH staff were unable to contact exposed child's parents. Unknown: Chlorine 1 Probable Severity: Low/Mild
050125	05/17/2005	Two girls and two boys ages four, five, six and eight had symptoms after playing on grass that had been sprayed with an herbicide about four hours earlier. The two older kids only had redness of the skin in areas exposed to the grass. The younger ones had ocular and neurological symptoms. They were not taken for medical care (parents were EMTs) and the symptoms dissipated within twelve hours. One symptom of eye dilation was suspicious due to lack of toxicological evidence for exposure to the formulation. Herbicide: unknown moss killer 2 Possible Severity: (2) Low/Mild 2 Insufficient Information Severity: Low/Mild
050129	05/19/2005	Fifteen female and male employees, ages 20 - 72 were drifted by an herbicide while working in and around greenhouses on the campus of a private school. Their supervisor reported that it was quite windy, the drift came from a ground application to an adjacent corn field, and one employee was pregnant. The spray drifted into the greenhouses. The employees could smell the chemicals: 12 had symptoms, one was taken to the hospital for care, three were asymptomatic. WSDA samples from the area and one worker's clothes were positive. Herbicide/algicide: Alachlor (ANSI), Atrazine (ANSI) 1 Definite

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		Severity: Moderate 10 Probable Severity: (10) Low/Mild 1 Possible Severity: Low/Mild
050131	05/23/2005	A 55-year-old female office worker was walking in the office hallway when a door opened to the outdoors. A smell of a recent herbicide application came into the building and she breathed in the chemical smell. She reported respiratory irritation within five to ten seconds. Her co-worker called the EMS and she was given oxygen and later went to a walk in clinic. Herbicide/algicide: Bromacil (ANSI) 1 Possible Severity: Low/Mild
050132	05/17/2005	A 35-year-old male applicator spraying cherries developed respiratory, gastrointestinal and neurological symptoms. He was wearing an air pressure helmet that was in disrepair. He had to open his visor while spraying and was exposed via inhalation and dermal contact. He sought medical treatment the same day. Fungicide: Pyraclostrobin Insecticide (excluding solely IGR and fumigants): Endosulfan (ANSI) 1 Probable Severity: Moderate
050133	05/25/2005 Severity	A 61-year-old female was working at a retail store as a cashier and a canister of the product broke open. It went into her face and she could taste it. She had neurological, gastrointestinal, ocular and respiratory symptoms and sought medical care. She missed five days of work. Educational material was provided. Insecticide and other: Metaldehyde; Carbaryl (ANSI) 1 Possible Severity: Moderate
050134	05/25/2005	A 67-year-old male experienced eye irritation two hours after spraying his home orchard with a fungicide. Symptoms worsened and he sought medical care. He was diagnosed with chemical abrasion to the eye. Fungicide: Chlorothalonil (ANSI) 1 Definite Severity: Low/Mild
050135	05/24/2005	A 32-year-old male applicator had gastrointestinal and neurological symptoms after exposure to a nicotinoid pesticide. He was wearing more than the required PPE, however, his was face was sprayed with an air blaster. He sought medical treatment two days later. His employer provided a list of pesticides that he was spraying. Fungicide: Quinoxyfen Insecticide (excluding solely IGR and fumigants): Imidacloprid 1 Possible Severity: Moderate
050136	05/27/2005	A 34-year-old female agriculture worker had symptoms after thinning in a vineyard. She worked in the same block three days before and saw that the area was infested with insects. When she returned to work there, many insects were dead on the ground. After working there she had numbness in her face and then some respiratory symptoms. She had sought medical care the day before due to reactions to trees, grapes, and weeds. The spray records showed that an application had been made 18 hours before. After the exposure to residues she again sought medical care and her symptoms correlated to an exposure with these health effects. Fungicide: Triflumizole Insecticide (excluding solely IGR and fumigants): Bifenthrin (ANSI) Insecticide and fungicide (1 and 4): Sulfur 1 Probable

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		Severity: Moderate
050137	05/25/2005	Two female agricultural workers ages 22 and 28 had ocular symptoms after thinning apples in an orchard sprayed 20 days before. The half life of the product ranges from 35 to 87 days and the REI for the product is 24 hours. Their symptoms correlated closely with the pattern of exposure. Insecticide and fungicide (1 and 4): Sulfur 1 Definite Severity: Low/Mild 1 Possible Severity: Low/Mild
050139	05/27/2005	A 44-year-old mother and her kids, boy (11) and girl (9) were drifted from a neighbor's burning pesticide containers. The mother sought medical care for respiratory and neurological symptoms. She obtained literature on the products from the pesticide company. She was advised of her right to complain to WSDA and/or to register as pesticide sensitive. She declined both but did accept our toll free phone number and the URL for the DOH Pesticide Program web page. Unknown: Dimethoate (ANSI), Quizalofop-ethyl 3 Possible Severity: (3) Low/Mild
050142	05/27/2005	A 32-year-old male farmworker was wearing a respirator while mixing the product. He said that he was not given the usual double filter. The pesticide organophosphate pesticide was in a powder form and he could smell and taste it. He had been applying for five years. He had GI, neurological and respiratory symptoms and missed four days work. Unknown: Azinphos-Methyl 1 Possible Severity: Moderate
050143	05/11/2005	A 19-year-old male roofer received spray in his face when a coworker sprayed a wasp nest that was nearby. He sought medical care for eye and respiratory symptoms. His symptoms resolved rapidly. Unknown: Permethrin, mixed cis,trans (ANSI), Tetramethrin (ANSI) 1 Probable Severity: Low/Mild
050145	04/18/2005	A 46-year-old female nursery worker was in an area treated for aphids the day before. The REI was observed. She recalls touching her mouth and face with her gloved hands. Later, areas of her face showed sensitivity and became swollen. She sought medical attention two days after the exposure. Insecticide (excluding solely IGR and fumigants): Fenpropathrin (ANSI), Acephate (ANSI) 1 Possible Severity: Low/Mild
050147	05/07/2005	A 30-year-old male applicator presents to the clinic complaining of dermal symptoms. He had been spraying for ten days, wearing full PPE. He says his PPE was in good condition and did not think his symptoms were from spraying. Insecticide and other: Carbaryl (ANSI) Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Potassium 1- naphthaleneacetate 1 Possible Severity: Low/Mild
050150	05/29/2005	A 26-year-old male was in his car and moved the seat back. A can of wasp and hornet spray was under the seat and was punctured. He felt the spray on his face, neck, and arms and breathed the mist. Two days later while driving the car he started developing gastrointestinal and neurological symptoms. He did not seek medical treatment. He called WPC while at work.

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		Insecticide: unspecified 1 Possible Severity: Low/Mild
050151	06/01/2005	A 76-year-old female complained of eye irritation and mild dizziness after herbicide spilled in her car on the way home from store. The cap was not tightened properly and there was no foil seal. The Case was referred to WSDA and random checks were made of product for loose lids; note found. She did not seek health care. Herbicide/algicide: Glyphosate, isopropylamine salt; Oxyfluorfen (ANSI) 1 Possible Severity: Low/Mild
050152	06/02/2005	A 40-year-old male school bus driver was on his route and while passing a facility he smelled a pesticide odor from an application that had been made. The only open window of the bus was next to him. He had neurological and respiratory symptoms but did not seek medical care. WSDA samples inside the bus windows and of his shirt were negative. He then observed an air blast application being made near a bus stop. None of the students present at the stop had symptoms. Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate, Glyphosate, isopropylamine salt, Dicamba, dimethylamine salt 1 Possible Severity: Low/Mild
050153	06/06/2005	A 34-year-old female was walking past her neighbor's house when she was sprayed by an application. She is immunosuppressed by medications for a chronic condition. She developed facial, dermal symptoms. She was wearing glasses and did not inhale the tank mix. 911 was called and she sought medical care the next day. Fungicide: Thiophanate-methyl (ANSI) Insecticide (excluding solely IGR and fumigants): Permethrin, mixed cis,trans (ANSI) Insecticide and other: Hexythiazox 1 Possible Severity: Low/Mild
050154	06/01/2005	Two male farm workers ages 19 and 22 developed dermal symptoms after entering an orchard that was sprayed with an insecticide. They were removing tree leaves from cherry trees. Their dermal symptoms developed after having contact with the leaves. One of them complained of other symptoms and he sought medical treatment. His employer indicated they were working in the orchard one day after the application to the trees. Insecticide and other: Carbaryl (ANSI) 2 Probable Severity: (2) Low/Mild
050155	06/01/2005	A 33-year-old female plant pathologist in her second trimester of pregnancy was drifted while doing a green house inspection of a commercial nursery. Mild eye and respiratory irritation resolved same day. DOH provided toxicological information regarding reproductive hazard of the pesticide. WSDA investigated. Insecticide (excluding solely IGR and fumigants): Pyridaben (proposed) 1 Possible Severity: Low/Mild
050156	06/03/2005	A 52-year-old male sprayed an aerosol insecticide into his car to control some flies. He left the car closed until 1 pm the next day. He drove the car into town and noticed difficulty breathing within an hour. He eventually sought medical help by going to an ER. After examination, he was admitted for three to four days. This person has some medical issues that make him more vulnerable. Insecticide (excluding solely IGR and fumigants): Allethrin, d-; Phenothrin, D- 1 Definite Severity: Moderate

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050160	05/31/2005	A 38-year-old male sprayed the product all day around his home without face or eye protection. It was windy. The following day he had multi systemic symptoms. He sought medical care four days later. Educational information focusing on prevention was provided. Herbicide/algicide: Butoxyethyl 2,4-dichlorophenoxyacetate; Butoxyethyl triclopyr 1 Possible Severity: Low/Mild
050162	06/10/2005	A 29-year-old female applied bait around her landscaping to control slugs. While applying the granular material some of the dust got into her mouth. She immediately rinsed her mouth. She felt some numbness, became concerned and sought medical attention the next day. It was the health care provider's impression that anxiety resulted from the exposure. Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Metaldehyde 1 Probable Severity: Low/Mild
050164	06/12/2005	A 49-year-old male sprayed himself in the face with the product. He had ocular symptoms and washed out his eyes. He sought medical care that day and was treated for a corneal abrasion. Multiple efforts were made to contact the case but he could not be located. Insecticide: unknown Raid product 1 Definite Severity: Low/Mild
050165	06/10/2005	A 76-year-old female was applying slug bait around her lawn and garden when the wind blew dust into her face and mouth. She rinsed her mouth and washed her face immediately. Nevertheless, she developed problems related to mouth irritation. She did not seek medical care. The acute problems were resolved fairly quickly. Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Metaldehyde 1 Possible Severity: Low/Mild
050167	06/12/2005	A 10-year-old boy was at his friend's home playing video games. His friend sprayed an aerosol insect repellent and a deodorant in the game room. The 10-year-old boy developed health effects, went home, showered, and changed clothes. The next day his mother took him to a clinic for an exam. Insect repellant: Diethyl-meta-toluamide and other isomers, N,N-; N-octylbicycloheptene 1 Possible Severity: Low/Mild
050168	06/14/2005	A 2-year-old boy ate roach killer insecticide powder from a storage area under a kitchen sink. The area was reportedly locked and child proofed. The child vomited and walked into the living room to show his mother. She washed him and immediately took him to the medical center. He was given activated charcoal and discharged. Insecticide (excluding solely IGR and fumigants): Boric acid 1 Definite Severity: Low/Mild
050169	06/15/2005	An 81-year-old female applied to rugs & furniture, and shortly afterwards sat on the furniture. Within three hours she developed respiratory symptoms and sought medical care the next day. She was ill for two days. Educational material was discussed and mailed to her. Insecticide (excluding solely IGR and fumigants): Allethrin, d-; Phenothrin, D- 1 Possible Severity: Low/Mild

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050174	05/12/2005	A 52-year-old male farm worker had an ocular exposure as he helped in the mixing/loading of a sprayer. He was not wearing the required PPE when a drop of the chemical mixture splashed up and in his left eye. He sought medical treatment 14 days later when symptoms did not resolve. Insecticide (excluding solely IGR and fumigants): Azinphos-Methyl 1 Definite Severity: Low/Mild
050176	06/20/2005	A 66-year-old male reported he got a glyphosate mixture on his hands while spraying around his home. He did not wear gloves and later in the day he reported dermal symptoms on his hands. He sought medical treatment two days later for increasing dermal symptoms. Unknown: Glyphosate, isopropylamine salt 1 Probable Severity: Low/Mild
050177	06/27/2005	A 16-year-old male lit a gopher bomb, placed it down a tunnel and watched to see what happened. His mother saw him around the smoke and called WPC with questions and concerns. The teen had some brief coughing with upper respiratory symptoms, but it cleared quickly. The boy did not see a physician. Rodenticide: Sulfur; Sodium Nitrate 1 Possible Severity: Low/Mild
050178	06/28/2005	Two farmworkers, a 25-year-old female and a 27-year-old male, were drifted while thinning apples. An unlicensed applicator using an air blaster was applying in an adjoining field. WSDA tests of the employee's clothing were positive for pesticides. They developed GI and neurological symptoms and were seen for medical care that day. They were enrolled in cholinesterase monitoring and the results were not significant. The case was referred to WSDA for evaluation of compliance to pesticide regulation. Insecticide (excluding solely IGR and fumigants): Azinphos-Methyl Insecticide and other: Carbaryl (ANSI) 2 Probable Severity: (2) Moderate
050179	06/19/2005	A 45-year-old male homeowner had malaise for a couple of days after spraying a mixture of herbicides. He was wearing more than the required PPE. Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate; Dicamba, dimethylamine salt, Metsulfuron-methyl 1 Possible Severity: Low/Mild
050180	06/23/2005	Two males ages 26 and 29 were about 30 feet from a pesticide application and felt the spray on the right side of their faces and on their right arms. One had dermal symptoms and the other also had ocular, neurological and gastrointestinal symptoms. They provided a piece of clothing to WSDA for testing. They then showered and did not seek medical care. The clothing samples were negative for pesticides. Insecticide (excluding solely IGR and fumigants): Thiamethoxam, Petroleum distillate, oils, solvent, or hydrocarbons; also paraffinic hydrocarbons, aliphatic hydrocarbons, paraffinic oil, Bifenazate 2 Possible Severity: (2) Low/Mild Severity: (2) Low/Mild
050181	07/05/2005	A 64-year-old female apartment tenant developed symptoms after she accidentally sprayed her eye with an insecticide. She washed her eye after the exposure. However, it still burned and itched. Insecticide (excluding solely IGR and fumigants): Permethrin, mixed cis,trans (ANSI); Tetramethrin (ANSI)

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		1 Definite Severity: Low/Mild
050182	06/28/2005	A 56-year-old female placed a new flea collar on her cat. At the end of the day the cat could barely stand up and there was a strong odor in house. The cat's owner had gastrointestinal and neurological symptoms that night and later sought medical care. EPA was notified and educational material provided to patient. Insecticide (excluding solely IGR and fumigants): Methoprene, S-; Tetrachlorvinphos 1 Possible Severity: Low/Mild
050192	07/04/2005	A 41-year-old female had eye and respiratory symptoms after herbicide spraying herself in the face when the bottle broke. She flushed eyes immediately at home and then again at the ER. Symptoms resolved rapidly with treatment. She was not wearing required PPE. She was educated about following the labels and given resources for alternative methods to handle weeds. Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate; Dimethylamine 2-(2-methyl-4- chlorophenoxy) propionate 1 Probable Severity: Low/Mild
050193	07/05/2005	A 49-year-old male Department of Transportation employee had neurological respiratory, and gastrointestinal symptoms after inhaling vapors from a road side herbicide application. He did not feel the pesticide but he said that he inhaled the vapors. He was the driver for the crew and he parked downwind from the application. He sought medical care the same day. Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate; Dicamba, dimethylamine salt, Metsulfuron-methyl, Picloram, potassium salt 1 Possible Severity: Low/Mild
050194	07/04/2005	A 55-year-old female used a hose-end sprayer to apply an insecticide/fungicide product to fruit trees on her head while spraying. Later that evening she had swollen areas on her neck and the next day areas of pain and irritation on her scalp. She sought medical attention for the burning skin surface. Multiple (product is classified as multiple classes …): Pyrethrins; Rotenone; Cube Resins other than rotenone; Xylene range aromatic solvent; Copper oleate; Cottonseed oil; EDC; Ethylene glycol 1 Definite Severity: Low/Mild
050195	06/01/2005	A 65-year-old male was thinning apples five days post application. He developed ocular, dermal and gastrointestinal symptoms and sought medical care. He returned to work after one week. Fungicide: Triflumizole Insecticide (excluding solely IGR and fumigants): Acetamiprid, Petroleum distillate, oils, solvent, or hydrocarbons; also paraffinic hydrocarbons, aliphatic hydrocarbons, paraffinic oil 1 Possible Severity: Low/Mild
050197	06/19/2005	A 40-year-old male cemetery worker who normally does not apply pesticides developed dermal symptoms on the second day of spraying around headstones. He is unlicensed. He was not wearing the required PPE. He sought medical treatment after spraying the second day when he became aware of his symptoms. Herbicide/algicide: Oryzalin (ANSI), Glyphosate, isopropylamine salt 1 Probable Severity: Low/Mild
050199	04/01/2005	A 32-year-old male developed dermal and respiratory symptoms while loading fungicides into a potato planter. He sought medical attention four days after onset of

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		symptoms. While loading the pesticide he felt the pesticide dust on his clothes and could taste and smell the formulation. He indicated not wearing any PPE. He did not want the case referred. Fungicide: Mancozeb; Thiophanate-methyl (ANSI) 1 Probable Severity: Moderate
050200	06/29/2005	A 40-year-old female employee had a history of asthma and was employed at a car dealership. Late one afternoon a PCO applied multiple products inside the building. She then had respiratory, ocular, and gastrointestinal symptoms when she came into work. Also at that time a fellow employee sprayed a ready to use product in her vicinity. She went to the ER where she was treated and saw her primary provider two days later. In the following three months she continued to have symptoms and was referred to an allergist and an occupational health specialist. She did not work for several months after the exposure and continued under evaluation when the case was closed. Insecticide (excluding solely IGR and fumigants): Cyfluthrin,, Orthoboric Acid 1 Probable Severity: Moderate
050201	06/09/2005	A 21-year-old male maintenance worker was assigned the task of applying herbicide to unwanted vegetation around his employers business. He accidentally spilled the liquid down the front of his pants, soaking his leg. He washed his leg and attempted to wash the chemical from his long legged pants. Later he noticed irritation and went to a clinic for medical attention. Herbicide/algicide: Prometon (ANSI) 1 Definite Severity: Low/Mild
050202	07/11/2005	An 81-year-old male developed ocular symptoms after he sprayed himself with a hand-held spray pump. He was fixing the nozzle on the pump when it splashed his face, eyes and mouth. He washed ten minutes later and then went to a clinic. The herbicide was a concentrate and his symptoms correlate to his exposure. Herbicide/algicide: Glyphosate, isopropylamine salt 1 Definite Severity: Low/Mild
050204	07/12/2005	A 74-year-old male applied an insecticide spray to his roses. The next day, he was working around his roses, picking up flower parts, without any PPE. He recalls wiping his face with his hands to remove perspiration. He did not bathe that evening. The next day he noticed considerable sensiitivity and itching around his face that prompted him to seek medical care. Insecticide and fungicide (1 and 4): Resmethrin (ANSI); Triforine (ANSI); Acephate (ANSI) 1 Probable Severity: Low/Mild
050205	07/13/2005	A local school district hired a professional application company to maintain the soccer field by spraying for broadleaf weeds. Two females aged 46 and 62 who were adjacent property owners reported feeling ill after the application. WSDA took samples around their property, but no detectable levels of the pesticide were found. Herbicide/algicide: Dicamba, dimethylamine salt; Mecoprop-P; 2,4-dichlorophenoxyacetic acid; Sulfentrazone 2 Possible Severity: (2) Low/Mild
050206	07/13/2005	A 38-year-old male, unlicensed but supervised, applicator developed symptoms characteristic of the fumigant he was applying to a wheat storage silo. He smelled a garlic odor during the application. He wore rubber gloves and a respirator filter recommended for the application. He did not seek medical care. Fumigant: Aluminum phosphide

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		1 Possible Severity: Low/Mild
050207	07/14/2005	A 28-year-old male worker was using a 2.5 gal pressurized tank to apply a moss control chemical to the roof of a client's home. The nozzle became restricted; he looked at the nozzle and attempted to check to clear any blockage. The nozzle came off under pressure and hit him in the right eye. He immediately washed out the eye. His supervisor suggested he seek medical care, which he did. He wore some PPE, however safety glasses didn't protect him. Herbicide/algicide: Zinc chloride 1 Definite Severity: Low/Mild
050208	07/13/2005	A 31-year-old female was exposed to foggers and had respiratory and neurological symptoms. Thee days later her spouse said she would seek medical care if her symptoms persisted. Multiple efforts were made to contact her and all were unsuccessful. Insecticide (excluding solely IGR and fumigants): Cypermethrin (ANSI) 1 Possible Severity: Low/Mild
050209	07/15/2005	A 21-year-old male had ocular symptoms after a hose filled with herbicide came loose, spraying his face, forehead and eyes. He washed his face and eyes for ten or more minutes. His foreman told him to go to the clinic even if he had no symptoms. The only PPE used was a half face respirator. The label did not require a respirator, face shield or goggles. Herbicide/algicide: Glyphosate, isopropylamine salt; Glyphosate, monoammonium salt 1 Definite Severity: Low/Mild
050210	06/25/2005	A 39-year-old male applicator was perspiring while placing fumigant tablets in the ground and began to itch. He sought medical care three days later for continuing dermal symptoms. He told DOH staff that he may have had contact with dust from the product bottle/container. Fumigant: Aluminum phosphide 1 Probable Severity: Low/Mild
050212	06/23/2005	A 14-year-old male cherry picker had respiratory and ocular symptoms while picking cherries. He had been having problems with sneezing and eye irritation and sought medical care two days after his symptoms reoccurred. His employer said the orchard was sprayed five and seven days before he entered the field. After reviewing the ingredients in the active formulation, it was found that the half-lives of the products are longer than the REI of the same. Fungicide: Quinoxyfen Insecticide (excluding solely IGR and fumigants): Imidacloprid Insecticide and fungicide (1 and 4): Sulfur 1 Definite Severity: Low/Mild
050214	07/16/2005	A 47-year-old male unlicensed applicator was applying to the lawn by a gas station. The wind blew the product into his face. He had respiratory and gastrointestinal symptoms that became worse. He taken to the ER by local EMS. A myocardial infarction was ruled out. Herbicide: chlorophenoxy 1 Possible Severity: Low/Mild
050215	06/13/2005	Two females, ages 31 and 48, had ocular and respiratory symptoms after picking cherries in an orchard. One of the workers sought medical care. The spray records showed an application conducted three and nine days before they entered the field.

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		Although the REI was observed they reported symptoms that could be related to the products. The half-lives of the active ingredients for both products were longer than the REI. Fungicide: Propiconazole Insecticide and other: Carbaryl (ANSI) 1 Probable Severity: Low/Mild 1 Possible Severity: Low/Mild
050216	07/19/2005	A 34-year-old mother used an insect repellent wipe on her child. She then did not wash her hands and removed her contacts. Within an hour her eyes were irritated and she called WPC. She went to the ER and her eyes were irrigated and examined for damage. She was released feeling much better. Insect repellant: Diethyl-meta-toluamide and other isomers, N,N- 1 Definite Severity: Low/Mild
050217	07/17/2005	An 11-year-old female student at a music camp used 'bug spray' before a performance. Some of the spray went in her eyes. She performed for 20 minutes before washing her eyes. After four days her mother took her for medical evaluation. Symptoms resolved in one week. Insecticide: unknown bug spray or repellent 1 Possible Severity: Low/Mild
050221	06/28/2005	A 24-year-old male applying fertilizers developed neurological, gastrointestinal and respiratory symptoms after smelling another pesticide application close by. He reported that he did not feel the spray. He was applying three to four rows from the pesticide application. He sought medical care early the next day. Insecticide (excluding solely IGR and fumigants): Imidacloprid 1 Possible Severity: Low/Mild
050226	05/03/2005	Two retired females, ages 53 and 63 developed ocular, respiratory and neurological symptoms after they smelled a pesticide application conducted in front of the property. They did not seek medical treatment. Swab and foliage samples collected by WSDA inside the property were positive. Insecticide (excluding solely IGR and fumigants): Novaluron Insecticide and other: Carbaryl (ANSI) 2 Probable Severity: (2) Low/Mild
050229	07/25/2005	A 40-year-old disabled male was exposed to a Raid insecticide. He went for medical care after having dermal, gastrointestinal and respiratory symptoms. Multiple unsuccessful efforts were made to contact him. He gave the medical staff a history of using a mask during the application. Insecticide (excluding solely IGR and fumigants): Pyrethrins; Piperonyl butoxide; Permethrin, mixed cis,trans (ANSI) 1 Possible Severity: Low/Mild
050231	07/12/2005	A 43-year-old female had neurological and respiratory symptoms after an aerial applicator drifted her property with a tank mix of fungicides. She sought medical care eight days later. The WSDA samples of a tree on the property were positive for one of the fungicides and samples made of the windows were negative. This may have been due to 14 days interim between the application and the sampling. WSDA determined that the application was not in accordance with label directions for agricultural use requirements. Fungicide: Mancozeb Insecticide (excluding solely IGR and fumigants):

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		Insecticide and fungicide (1 and 4): Sulfur 1 Probable Severity: Moderate
050232	06/20/2005	A 50-year-old homeowner had neurological symptoms after spraying an organophosphate insecticide onto the apple tree in his yard. He had had symptoms previously when he used the product. The health care provider did not find objective signs of exposure. This included testing for depressed cholinesterase. Insecticide and fungicide (1 and 4): Methoxychlor; Malathion (ANSI); Carbaryl (ANSI); Captan 1 Possible Severity: Low/Mild
050233	07/27/2005	A 40-year-old old male applicator had neurological and gastrointestinal symptoms while spraying a tank mix. One of the products was an organophosphate. He was using a ground sprayer and felt the spray on his rubber suit and could see the mist through his full face respirator. He said his supervisor told him to change the filter every three days. He changed the filter whenever he smelled the pesticides. His supervisor took him to the clinic. One day later his cholinesterase levels did not show significant depression. DOH referred the case to L & I for evaluation. Insecticide (excluding solely IGR and fumigants): Phosmet, Bacillus thuringiensis subsp. kurstaki 1 Possible Severity: Low/Mild
050234	07/27/2005	A 35-year-old female alfalfa harvester developed neurological and gastrointestinal symptoms after water splashed on her from a hose used previously to mix herbicides. She was using the hose to wash off a swather. She sought medical care that evening. Herbicide/algicide: Paraquat dichloride 1 Possible Severity: Low/Mild
050237	06/28/2005	A 41-year-old male commercial applicator worked for a national lawn maintenance company. While applying a fertilizer/herbicde mix to a customers lawn, the pressure hose detached from the spray gun, causing the mix to go into his eye and face. He reported some irritation for a couple of days, and 12 days later sought medical care. Herbicide/algicide: Dicamba, dimethylamine salt; Dimethylamine 2-(2-methyl-4-chlorophenoxy)propionate; MCPA, dimethylamine salt; Mecoprop-P 1 Possible Severity: Low/Mild
050239	08/03/2005	A 47-year-old male mechanic was drifted upon by an aerial application while fixing/welding a water pump in a potato circle. The following day he sought medical care. Another worker avoided exposure by staying inside of the truck. Insecticide (excluding solely IGR and fumigants): Spiromesifen 1 Possible Severity: Low/Mild
050240	07/21/2005	A 36-year-old licensed applicator had neurological, dermal, and gastrointestinal symptoms after a hose broke and splashed onto his face. The tank mix contained two herbicides. He immediately washed. He sought medical care sixteen days later. DOH discussed the importance of wearing proper PPE and suggested better methods of decontamination of the leather boots and gloves. Herbicide/algicide: Picloram, potassium salt, Dicamba, dimethylamine salt 1 Possible Severity: Moderate
050242	08/05/2005	The mother of a 3-year-old female had placed an aerosol container of insect repellent in a diaper bag. She had the bag along with her child in a shopping cart in a grocery store. The 3-year-old grabbed the container and discharged the spray into her eye. The mother immediately flushed the child's eyes at the store eye wash

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		station. She then took her to a clinic where the child's eyes were flushed and examined, and she was discharged. Insect repellant: Diethyl-meta-toluamide and other isomers, N,N- 1 Definite Severity: Low/Mild
050243	08/07/2005	A 58-year-old male found a large colony of ants around some wood piled in his yard. He mixed an insecticide at eight tablespoons per gallon using a trigger pump sprayer. The hose detached from the nozzle, spraying him in the right eye. He flushed the eye for 30 minutes. As he continued having eye irritation, he went to the ER. He eye was flushed again, examined for foreign bodies and he was discharged. Insecticide (excluding solely IGR and fumigants): Lambda-cyhalothrin 1 Definite Severity: Low/Mild
050244	07/06/2005	A 22-year-old apple thinner sought medical care for eye irritation which he felt was due to spray dust on the trees. He did not seek medical care until two weeks after initial symptoms. Symptoms may have been aggravated by use of home herbal remedy to eyes prior to seeking treatment. Insecticide (excluding solely IGR and fumigants): Acetamiprid 1 Possible Severity: Low/Mild
050245	07/15/2005	A 34-year-old female parks department employee climbed into the back of a truck on the way to another job site. Her co-worker had climbed in first. The spray wand of his back pack sprayer caught on her clothing and sprayed her in the face and mouth. An hour later she went back to the shop, flushed her face and then sought medical attention at a walk-in clinic. She experienced brief upper respiratory irritation. Herbicide/algicide: Glyphosate, isopropylamine salt 1 Possible Severity: Low/Mild
050247	07/05/2005	A 43-year-old male apple picker presents to the ER complaining of respiratory symptoms. Patient had been picking apples for 15 days and associated his symptoms with spray residues on the trees. Insecticide and fungicide (1 and 4): Kaolin 1 Possible Severity: Low/Mild
050249	07/12/2005	A 36-year-old male developed skin symptoms at work while thinning apples. According to spray records the most recent application to the block of trees occurred eight days previous to onset. He sought medical care and was referred to MD for evaluation. Insecticide (excluding solely IGR and fumigants): Methoxyfenozide, Imidacloprid, Bifenazate 1 Possible Severity: Low/Mild
050250	07/10/2005	A 9 month old female was sprayed with a pyrethroid spray by her 3-year-old sibling. She cried and pulled on her ear. Her mother took the baby to a HCP. DOH provided educational and prevention materials to the mother. Insecticide (excluding solely IGR and fumigants): Tralomethrin (ANSI) 1 Possible Severity: Low/Mild
050251	08/05/2005	A 27-year-old male and 23-year-old female riding motorcycles were exposed by a truck misting/cold fogging for mosquito control. While attempting to determine which product they had been exposed to, a 55-year-old male friend arrived. Shortly thereafter a second mosquito control vehicle arrived and had not turned off his equipment, again exposing the two plus the third person. All three reported

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Case	Exposure Date	Incident Description
		symptoms but none sought medical treatment. WSDA investigated the incident. Insecticide (excluding solely IGR and fumigants): Naled (ANSI) 3 Possible Severity: (3) Low/Mild
050252	08/08/2005	A 21-year-old male unlicensed mixer and loader was exposed from a splash of chemicals at work while preparing a tank mix. He was wearing safety goggles. He sought medical care. Herbicide/algicide: Diquat dibromide Insecticide (excluding solely IGR and fumigants): Esfenvalerate 1 Possible Severity: Low/Mild
050255	06/20/2005	A 39-year-old male applying herbicides in a vineyard developed eye symptoms. He self-treated for several days before seeking medical treatment. Herbicide/algicide: Glyphosate, isopropylamine salt; Glyphosate, monoammonium salt 1 Possible Severity: Low/Mild
050260	08/14/2005	A 64-year-old female applied a herbicide with a hand sprayer to control unwanted vegetation in her gravel driveway. The nozzle became restricted. She removed the nozzle under pressure and spray came into her face and eyes. She washed her eyes and then sought medical attention, as she was concerned about her sight. Herbicide/algicide: Glyphosate, isopropylamine salt 1 Definite Severity: Low/Mild
050262	08/10/2005	A 47-year-old female sprayed for spiders at her vacation cabin in Grant County. She had respiratory problems soon after that persisted for a week. She sought medical care one week later, was evaluated, and it was recommended that she continue to use an inhaler. Insecticide (excluding solely IGR and fumigants): Cyfluthrin 1 Probable Severity: Low/Mild
050272	08/26/2005	A 3-year-old boy sprayed insect repellent in his face. The aerosol can was left sitting on the floor where the child could pick it up. The child developed immediate irritation of his right eye and was taken to a clinic and treated for 'corneal abrasion post-chemical exposure'. Insect repellant: Diethyl-meta-toluamide and other isomers, N,N- 1 Definite Severity: Low/Mild
050273	08/26/2005	An 18-year-old male retail worker sustained a mild eye injury after opening a case of Raid aerosol cans that had been warped in the shipping process. The corner of box depressed the activation button on top of one of the cans and sprayed him in the eye. He used the eye wash at work and then was assessed in the ER. Symptoms resolved rapidly. Insecticide and other: Pyrethrins; Octyl bicycloheptene dicarboximide, N-; Piperonyl butoxide; Tetramethrin (ANSI); Methoprene, S- 1 Possible Severity: Low/Mild
050276	09/01/2005	A 23-year-old male worker was loading a plane at an airstrip for an aerial application to potatoes when he was exposed to fumes from an open hose valve. He developed symptoms four to five hours later. He was wearing pants, a long sleeve shirt, rubber gloves and 1/2 face respirator at the time. Information on time of self decontamination conflicts. Unknown: Carbofuran (ANSI) 1 Possible

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Washington State Department of Health Agency Data Summary

Case	Exposure Date	Incident Description
		Severity: Moderate
050277	09/02/2005	A 62-year-old male agricultural worker was exposed at work. He was laying plastic on the ground in an apple orchard that may have been treated the night before. He was not advised of application and then became ill at home after work. Insecticide (excluding solely IGR and fumigants): Azinphos-Methyl 1 Possible Severity: Moderate
050278	09/04/2005	A mother of two small children was concerned about spiders in her home and sprayed an aerosol insecticide. She accidentally sprayed her 17 month old daughter in the left eye. The mother flushed the child's eye for 15 minutes and then went to an ER. After an exam and evaluation the child was discharged. Insecticide: unknown aerosol 1 Definite Severity: Low/Mild
050280	08/16/2005	A 39-year-old female had an asthmatic reaction after aerosol insecticide was used in her office building while employees were present. She sought medical care. The insect spray was used in violation of employer's policy and this was addressed by employer. Insecticide (excluding solely IGR and fumigants): Permethrin, mixed cis,trans (ANSI); Tetramethrin (ANSI); Allethrin, d- 1 Probable Severity: Moderate
050281	09/05/2005	A 57-year-old male was applying to the outside of his home to fend off spiders. He was dressed in shorts, short sleeve shirt and had no PPE. He said it was 80 degrees and windy and he knew better. Immediately afterwards he developed chest pain, was transported to the hospital and treated for two days. Educational material on organophosphates was provided. Insecticide (excluding solely IGR and fumigants): Diazinon (ANSI) 1 Possible Severity: Moderate
050282	09/05/2005	A 41-year-old homeowner dissolved a dry granular form of moss killer and applied it for one hour to his roof and siding. He did not use gloves. Some of the material dripped onto his left hand. He then washed his hands and his left hand began to burn. He was seen at the ER twice and treated for first and second degree burns. He said that he would wear gloves next time. DOH encouraged use of goggles as well. Herbicide/algicide: Zinc sulfate monohydrate 1 Definite Severity: Moderate
050283	08/11/2005	A 63-year-old female placed ten mothballs in several rooms in her mobile home, for about three weeks. She called WPC and reported allergy like symptoms related to product. No additional medical care was sought. Insecticide (excluding solely IGR and fumigants): Naphthalene 1 Possible Severity: Low/Mild
050284	09/09/2005	A 20-year-old male asphalt company employee developed ocular symptoms after he felt the herbicide he was spraying hit his eyes. He did not seek medical treatment, but did go the fire station for advice. The label does not require the use of PPE, but the MSDS does. Herbicide/algicide: Diuron (ANSI); Imazapyr (ANSI) 1 Possible Severity: Low/Mild
050285	09/09/2005	A 41-year-old male home owner used a moss control product without reading the label. He wore no eye protection. While cleaning the spray nozzle he felt a drop of

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Case	Exposure Date	Incident Description
		the concentrated product hit his left eye. He rinsed his eye immediately after feeling a burning sensation. He later sought medical treatment. Herbicide/algicide: Ferric sulfate 1 Definite Severity: Low/Mild
050286	08/21/2005	A 21-year-old male apple picker was exposed at work. Patient associates his skin symptoms to spray residues on the trees. Spray records obtained show that the last application occurred one month previous to onset. Fungicide: Ziram Insecticide (excluding solely IGR and fumigants): Azinphos-Methyl Insecticide and fungicide (1 and 4): Kaolin 1 Possible Severity: Low/Mild
050287	05/16/2005	A 20-year-old male returned to his home that had been treated with three products three hours earlier by a licensed PCO. He went to sleep and woke up with gastrointestinal and neurological symptoms. He sought medical care at an ER. Insecticide (excluding solely IGR and fumigants): Deltamethrin, Fipronil, Deltamethrin 1 Possible Severity: Low/Mild
050288	09/07/2005	A 22-year-old unlicensed commercial applicator had gastrointestinal, neurological, respiratory and ocular symptoms. He reported that he had tried to stop a gushing leak from the spray tank of a runaway spray truck that went over an embankment. He reported that he inhaled and ingested the herbicide and insecticide mix and sought medical care. His supervisor said that the employee was only observed to be gagging and he was not close to the leak. Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate; Dicamba, dimethylamine salt; Dimethylamine 2-(2-methyl-4-chlorophenoxy)propionate; Mecoprop-P Insecticide (excluding solely IGR and fumigants): Permethrin, mixed cis,trans (ANSI) 1 Possible Severity: Low/Mild
050289	09/10/2005	A 65-year-old female was taking care of a relative's dogs and found fleas. She set off more foggers than needed for the living space and left the home. On return she had respiratory symptoms. She then spread a pyrethrin powder on her carpets. Six days later her hands were cold and purple. She sought medical care. Second set of symptoms most likely not related. Insecticide (excluding solely IGR and fumigants): Cypermethrin (ANSI), Pyrethrins; Piperonyl 1 Possible Severity: Low/Mild
050290	09/19/2005	A 66-year-old female ran over a can of insect spray while mowing her lawn. Spray discharged in her face and caused eye injury. She sought medical care. Injury appeared to exacerbate previous eye condition. Insecticide: unknown (Raid) 1 Probable Severity: Low/Mild
050291	08/31/2005	A 37-year-old female employee had respiratory and neurological symptoms after wiping up pesticide product that came through a door jam from an exterior application for spiders. The application was made at an Alzheimer's care facility. The worker smelled the chemical and had contact with it during cleanup. She sought medical treatment the same day and did not have objective signs after the exposure. WSDA samples were positive for pesticide residues in the area where the clean up occurred.

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Case	Exposure Date	Incident Description
		Insecticide (excluding solely IGR and fumigants): Bifenthrin (ANSI), Pyrethrins; Rotenone; Cube Resins other than rotenone 1 Probable Severity: Low/Mild
050292	08/04/2005	A 32-year-old orchard irrigator reported he had an ocular exposure as he drove on his motocycle by an herbicide application in the orchard. He sought medical treatment four days later. Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate, Glyphosate, isopropylamine salt; Glyphosate, monoammonium salt, Chloro-4,6-bis(ethylamino)-s-triazine 1 Definite Severity: Low/Mild
050295	09/22/2005	A 82-year-old male presented to the ER with ocular symptoms. While spraying outside of his home he got a couple of drops in his left eye. He had his personal glasses on. He immediately rinsed his eye and went to the hospital. Insecticide (excluding solely IGR and fumigants): Pyrethrins; Piperonyl butoxide; Permethrin, mixed cis,trans (ANSI) 1 Definite Severity: Low/Mild
050296	09/21/2005	A 41-year-old female apple picker developed dermal symptoms and sought medical care the next day. She associates her symptoms to spray residues on the trees. The last application was three weeks previous to onset. Insecticide (excluding solely IGR and fumigants): Imidacloprid 1 Possible Severity: Low/Mild
050299	09/08/2005	A 49-year-old male walked out of his office on a lunch break, and breathed the odor of a herbicide application made two day earlier. He reported that a landscape crew made a broadleaf application and the smell irritated his upper respiratory tract. A month later still with upper respiratory effects and he sought medical attention. Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate 1 Possible Severity: Low/Mild
050301	10/27/2005	The parents of an 8-year-old male neither returned phone calls nor responded to a letter requesting reply. The WPC report described that the child had his hair treated for lice control. While rinsing his hair, lice shampoo got into his eyes. His eyes became swollen, red and irritated. After calling the WPC, the boy was taken for medical treatment. Unknown: Permethrin, mixed cis,trans (ANSI) 1 Definite Severity: Low/Mild
050304	11/04/2005	A 37-year-old male employee presented to the doctor's office complaining of symptoms from inhalation of a fumigant. The medical assessment was "inhalation of pesticide exposure". Patient denied DOH interview so further details about the exposure were not available. Fumigant: Metam-sodium 1 Possible Severity: Low/Mild
050308	11/23/2005	A 53-year-old female shampooed her hair with a lice control shampoo. She got some in her eyes and then flushed them. The next morning her eyes were irritated. She called WPC and they recommended she seek medical attention. She went to a local clinic where she was treated and released. Unknown: Permethrin, mixed cis,trans (ANSI) 1 Definite

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Case	Exposure Date	Incident Description
		Severity: Low/Mild
050309	11/30/2005	A 28-year-old male developed neurological, gastrointestinal and respiratory symptoms while he was applying a fumigant by spoon/hand for control of orchard mice. He sought medical care and said there were windy conditions and his long sleeve shirt probably was exposed to the fumigant dust. His employer provided spray records. Rodenticide: Zinc phosphide (Zn3P2) 1 Possible Severity: Low/Mild
050310	12/11/2005	Parents shampooed their 1-year-old son's hair for lice control. When some shampoo got into his eyes, they rinsed out the suds. The next morning his eyes were irritated and swollen. He was taken to the hospital ER for exam and treatment. He was discharged with improvement. Unknown: Pyrethrins 1 Definite Severity: Low/Mild
050311	09/26/2005	A 44-year-old male apple picker developed dermal symptoms while picking. He said chemical residues on the tree fell inside his shirt. He sought medical attention seven days later. His employer said that the orchard was sprayed nine and 14 days before his exposure. Insecticide (excluding solely IGR and fumigants): Bacillus thuringiensis subsp. kurstaki, Acetamiprid 1 Probable Severity: Low/Mild
050313	08/09/2005	A 41-year-old male pest control technician was covered with insecticidal dust when his hand-held duster malfunctioned. He reported dermal symptoms and sought medical treatment 3 days later. Patient did not return phone calls from DOH. DOH reached his supervisor for interview. Insecticide (excluding solely IGR and fumigants): Deltamethrin 1 Possible Severity: Low/Mild
050314	12/05/2005	Three males, ages 31, 32 and 38 were nearby when a truck load of waste materials, including pesticides, powdered chlorine and bromine, was dumped at a transfer station and caught fire. All the individuals had respiratory symptoms and one person sought medical care. Pierce County Health Dept. and DOE coordinated their investigations. Unknown: 2,4-dichlorophenoxyacetic acid, Diazinon (ANSI), Dicamba, dimethylamine salt 3 Possible Severity: (3) Low/Mild

Washington State Department of Labor and Industries

Washington State Department of Labor and Industries Summary of Pesticide Inspections, 2005									
City, County Inspection #	**Pesticides Involved**	**# of Employee**	**Type of Business**	**How Exposed**	**Other Agencies Involved**	**Incident Date/ Complaint Date**	**Inspection Dates (Opened) (Closed)**	**Pesticide Related Citations/Costs**	**Type of Inspection**
Orting Pierce 309238483	Tenkoz Govern 4E (Chlorpyrifos) Lorsban 15G (Chlorpyrifos) Tenkoz trifluralin 4EC Thionex 50W	15	Vegetables and Melons		WSDA T013-2005		8/18/05 1/26/06	**Failure to Abate Citations** 307 60005-1 No respiratory protection program $1250.00 307-60605 – No Respirator fittest $1250.00 307-60805 – Not effective Respirator training $1250.00 **General Citations**: Employer did not certify that violations had been abated $100.00 **Penalties Assessed** $3,850.00	Follow-up 307863548
La Center Clark 306710054	Pesticide Herbicides NuCOP (Cupric hydroxide) Lorsban Javelin WG Aim Chlorpyriphos 4F Foamy Q&A Acid Disinfectant	25	Berry Crop		DOH		7/11/05 7/12/05	**Serious Citations** No Accident Prevention Program $150.00 **General Citations** Pesticide storage near housing No Chemical Hazard Communication Program No hazardous chemical inventory No MSDS for each chemical used No First aid trained person No orientation on field sanitation **Penalties Assessed** $150.00	Referral

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City, County Inspection #	Pesticides Involved	# of Employee	Type of Business	How Exposed	Other Agencies Involved	Incident Date/ Complaint Date	Inspection Dates (Opened) (Closed)	Pesticide Related Citations/Costs	Type of Inspection
La Center Clark 309018612	Lorsban 4E (chlorpyrifos)	20	Berry Crops Blueberries		DOH	7/11/2005	7/11/05 7/13/05	**Serious Citations** No Accident Prevention Program No hand washing facilities No toilet **General Citations** No written chemical hazard communication program No chemical inventory No MSDS No water with single use cups No orientation on sanitation No first aid trained employees **Penalties Assessed** $400.00	Referral
Woodland Benton 308442755	Captan 50W,Actellic SE (cholinesterase inhibitor) Systec 1988 Truban 25 EC Terraclor 75,Thiram granules Merit 75	20	Nursery Bulbs				1/11/05 3/16/05	**Serious Citations** No emergency eyewash $100.00 No pesticide handler or hazardous chemicals training in the past 5 years $100.00 **General Citations** Respiratory Protection Program Deficient No information on voluntary respirator use No medical evaluation for respirator No annual respirator fit tests Wearing respirators with facial hair Improper respirator storage **Penalties Assessed** $200.00	Referral

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City, County Inspection #	Pesticides Involved	# of Employee	Type of Business	How Exposed	Other Agencies Involved	Incident Date/ Complaint Date	Inspection Dates (Opened) (Closed)	Pesticide Related Citations/Costs	Type of Inspection
Wenatchee Chelan 309010213	Thionex 50W (50% endosulfan)	26	Deciduous (apple) Fruit Trees	Employee sprayed Thionex for 4 hours with a broken respirator power cord.		5/17/05 6/7/2005	6/7/05 9/23/05	**Serious Citation**: Did not inspect and repair respirators $1,800.00 **General Citation**: No safety meeting minutes **Penalties Assessed** $1,800.00	Complaint
Vancouver Clark 309241941	Round Up Ultra Max II (glyphosate), Curtail (chlorpyralid), Brush Spray, Fence Row Spray, Pasture Spray, Garlon 4, Hansten, Glystar Plus, Weedone LV6, Dual II Magnum, Buccaneer	6	Dairy (540 acres)			8/2/05	9/2/05 9/29/05	**Serious Citations**: No emergency eyewash or shower $300.00 No MSDS for hazardous chemical $300.00 No respirator fit tests $150.00 **General Citations**: No Chemical Hazard communication program No labels on containers w/ hazardous chemicals No Medical Evaluations No respirator program Food stored in toilet and pesticide storage rooms (referred to WSDA) **Penalty Assessed**: $750.00	Complaint
Pasco Franklin 308582253	Pesticides	15	County Auditor's Office			2/16/05	2/24/05 3/16/05	**Serious Citations**: No emergency eyewash $750.00 No PPE hazard assessment $200.00 No Chemical Hazard Communication Program including employee training $200.00 **Penalty Assessed**: $1,150.00	Complaint

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City, County Inspection #	Pesticides Involved	# of Employee	Type of Business	How Exposed	Other Agencies Involved	Incident Date/ Complaint Date	Inspection Dates (Opened) (Closed)	Pesticide Related Citations/Costs	Type of Inspection
Mountlake Terrace Snohomish 307963017	Super Trimec Crossbow Round up Renovate Cassaron Orthonex Merit Weed master	35	Lawn and Garden Services				9/1/04 2/17/05	**Serious Citations**: No emergency washing facilities $250.00 **General Citations**: No chemical hazard communication program or inventory No safety committee or bulletin board No written respirator program No medical evaluation for respirator **Penalty Assessed**: $250.00	Programmed
Quincy Grant 309014140	Herbicides Round Up Original Max, Atrazine 4L	12	Wheat Farm Onion packing				10/11/05 10/21/05	**Serious Citations**: No Accident Prevention Program $250.00 **General Citations**: No Chemical Hazard Communication Program **Penalty Assessed**: $250.00	Programmed
Mt Vernon Skagit 308673607	Pesticides	11	Flower Nursery Stock			4/15/05	4/22/05 4/27/05	**General Citations** Incomplete Pesticide inventory records No Chemical Hazard Communication Program No accident Prevention Program **No Penalties Assessed**	Referral
Mill Creek Snohomish 308446699	Bayer advanced rose and flower	18	Retail Nursery				1/21/05 3/2/05	**General Citations**: No Chemical Hazard Communication Program No hazardous chemicals inventory No Respirator Program No medical evaluation for respirator **No Penalties Assessed**	Referral

Washington State Department of Labor and Industries
Summary of Pesticide Inspections, 2005

City, County Inspection #	Pesticides Involved	# of Employee	Type of Business	How Exposed	Other Agencies Involved	Incident Date/ Complaint Date	Inspection Dates (Opened) (Closed)	Pesticide Related Citations/Costs	Type of Inspection
Woodland Benton 308670116	Roundup Crossbow	2	Timber Tract			3/23/05	3/30/05 4/12/05	**General Citations**: No Chemical Hazard Communication Program No Accident Prevention Program **No Penalties Assessed**	Complaint
Royal City Grant 309137339	Trifol Deliver Calcium Silguad	35	Apple orchard	Entering before REI		8/11/05	8/3/05 8/19/05	**General Citations**: No soap and single-use towels. Pesticide safety information not posted. Personal protective equipment stored in pesticide-contaminated areas with personal clothes. **No Penalties Assessed**	Complaint
Mattawa Grant 308754738	Organophosphate pesticides	46	Deciduous Tree Fruits (apples) 373 acres			5/18/05	6/29/05 11/28/05	**General Citations**: No worker training or fittest records No Respiratory Protection Program No cartridge change out schedule **No Penalties Assessed**	Complaint
Pasco Franklin 308667377	Pesticides	14	Bulk material transport, tankers			3/17/05	4/22/05 5/5/05	**General Citations**: No Chemical Hazard Communication Program **No Penalties Assessed**	Complaint
Redmond King 309237394	Methyl Bromide	5	Catalogue and Mail Order	Employer receives fumigated containers		8/4/05	8/15/05 8/22/05	**General Citations** No Accident Prevention Program including method to ensure employees are not exposed to Methyl Bromide **No Penalties Assessed**	Complaint
Chewelah Stevens 309238988	Glyphosate Chlorothalonil Etoxazole Abamectin	33	Nursery – Ornamental Trees, Sod				8/19/05 9/08/05	**General Citations**: Employee with no chemical hazard communication training.	Programmed

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City, County Inspection #	Pesticides Involved	# of Employee	Type of Business	How Exposed	Other Agencies Involved	Incident Date/ Complaint Date	Inspection Dates (Opened) (Closed)	Pesticide Related Citations/Costs	Type of Inspection
Olympia Thurston 30844113	Herbicides Tahoe 4E	1	Forestry				12/17/04 2/7/05	**General Citations** Personal Protective Equipment (PPE) not worn as required, employee applying pesticide w/o gloves required by label **No Penalties Assessed**	Programmed
Prosser Cowlitz 309237527	Pesticides	8	Wheat Farm 40 acres 170 acres				7/18/05 9/27/05	**General Citations**: Did not display pesticide safety poster	Programmed
Wilbur Lincoln 309237923	Guthion 50WP Lorsban 4E Rally Microthiol Sulfur Promotion Thiosol Sevin Amid thin Sorba MG Regulaid Zinc 50 Simazine 4L Princip Solicam DF	1	Orchard Wheat farm				8/31/05 10/31/05	**General Citations**: No Chemical Hazard Communication Program No Accident Prevention Program No Respiratory Protection Program No respirator fit testing **No Penalties Assessed**	Programmed
Greenacres Spokane 309134542	Surflan Rhomene Roundup	14	Nursery – Ornamental Flowers				7/26/05 8/04/05	**General Citations**: No training on pesticide hazards No respiratory program including medical evaluations **No Penalties Assessed**	Programmed

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City, County Inspection #	Pesticides Involved	# of Employee	Type of Business	How Exposed	Other Agencies Involved	Incident Date/ Complaint Date	Inspection Dates (Opened) (Closed)	Pesticide Related Citations/Costs	Type of Inspection
Spokane Spokane 309237964	Roundup (Glyphosate) Deadline MP (Metaldehyde) Ornamec Arsenal	2	Nursery – Ornamental Flowers				8/30/05 9/07/05	**General Citations**: No Chemical Hazard Communication Program No hazardous chemicals inventory. No MSDS for each hazardous chemical No training about hazardous chemicals. **No Penalties Assessed**	Programmed
Endicott Whitman 309386985	Pesticides Phenoxys Ureas	2	General Farm Cattle 4200 acres of Wheat				10/18/05 10/18/05	**General Citations**: No Chemical Hazard Communication Program No Accident Prevention Program No MSDS for each hazardous chemical used. No safety meeting minutes **No Penalties Assessed**	Programmed
Olympia Thurston 308443118	herbicides	1	Forestry Services				12/17/04 1/3/05	**General Citations**: Inadequate PPE for herbicide application **No Penalties Assessed**	Programmed
Connell Franklin 309375087	herbicides	2	Beef Cattle Feedlot				9/21/05 10/22/06	**General Citations** No Chemical Hazard Communication Program	Programmed
Colbert Spokane 309998144	Herbicides Cholinesterase inhibiting pesticides	3	Christmas trees				10/5/05 10/10/05	**General Citations** No Accident Prevention Program **No Penalties Assessed**	Programmed
Pasco Franklin 309589323	Pesticides	14	Bulk material transport				12/09/05 12/13/05	**No Citations issued** **No Penalties Assessed**	Follow up 308667377

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City, County Inspection #	Pesticides Involved	# of Employee	Type of Business	How Exposed	Other Agencies Involved	Incident Date/ Complaint Date	Inspection Dates (Opened) (Closed)	Pesticide Related Citations/Costs	Type of Inspection
Royal City Grant 309625192	Trifol Deliver Calcium Silguad	35	Apple orchard				12/22/05 12/23/05	**No Citations issued** **No Penalties Assessed**	Follow up 309137339
Prescott Walla Walla 309012243	Rally Sevin	80	Apple Orchard	Spraying & possible drift onto employees thinning apples	DOH	5/25-31/05/ 6/13/05	6/30/05 6/30/05	**No Citations issued** **No Penalties Assessed**	Referral
Pasco Franklin 309016285	Rally Intrepid Calcium Sevin	80	Apple & Cherry Orchard	Spraying cherries & apples possible drift onto employees thinning	DOH	5/25-31/05/ 6/13/05	6/30/05 6/30/05	**No Citations issued** **No Penalties Assessed**	Referral
Mattawa Grant 309479855	Pesticides Imidan, Dipel, Calcium Chloride	0	Apple Orchard	Spraying apples w/o deconta-mination, improper respiratory protection	DOH	10/26/05	12/2/05 12/2/05	**No Inspection** No employees at time of inspection, went to Mexico **No Penalties Assessed**	Referral

Appendix D
License Types and Enforcement Action Definitions

Washington State Department of Agriculture, Pesticide License Types

Washington State Department of Agriculture, Enforcement Action Definitions

Washington State Department of Agriculture, Pesticide License Types

WSDA PESTICIDE LICENSE TYPES

Commercial Applicator	A person engaged in the business of applying pesticides to the land/property of another. This land can either be publicly or privately owned. Prior to license issuance, a Financial Responsibility Insurance Certificate (FRIC) must be filed with WSDA by the insuring company.
Commercial Operator	A person employed by a WSDA-licensed commercial applicator to apply pesticides to the land of another. This land can either be publicly or privately owned.
Commercial Pest Control Consultant*	A person who sells or offers pesticides for sale at other than the licensed pesticide dealer outlet from which they are employed. In addition, commercial consultants may offer or supply technical advice or make recommendations to the users of non-home and garden pesticides. They may also perform wood destroying organism inspections. Licensed and employed commercial applicators and commercial operators may act as commercial consultants without acquiring the consultant's license.
Dealer Manager*	A person who supervises the distribution of pesticides (other than home and garden products) from a licensed pesticide dealer outlet.
Private Applicator	A person who applies or supervises the application of a "Restricted Use" pesticide on land owned or rented by him or his employer for the purpose of producing an agricultural commodity.
Private Commercial Applicator	A person who applies of supervises the use of a "Restricted Use" pesticide on land owned or rented by him or his employer for purposes other than the production of an agricultural commodity.
Public Operator	A person who, while acting as an employee of a governmental agency, applies restricted use pesticides by any means or general use pesticides by power equipment on public or private property. Public operators may act as public consultants. (Public operators licensed only in the Public Health category are exempt from the fee.)
Public Pest Control Consultant*	A person who, while acting as an employee of a governmental agency, offers or supplies technical advice, supervision, aid, or makes recommendations to the user of pesticides other than home and garden products. Public Consultants may not act as public operators without the operator's license.
Demonstration and Research Applicator	A person who applies or supervises the use of any experimental or restricted use pesticide to small experimental plots at no charge. Public employees performing research applications fall under the licensing requirements of the public operator.

Structural Pest Inspector	An individual who performs the service of inspecting a building for wood destroying organisms, their damage, or conditions conducive to their infestation. Wood destroying organisms include insects or fungi that will consume, excavate, develop in, or otherwise modify the integrity of wood or wood products. They include, but are not limited to, carpenter ants, moisture ants, subterranean termites, damp wood termites, beetles in the family Anobiidae, and wood decay fungi (wood rot).

** License does not allow the holder to use or supervise the use of a restricted use pesticide. Refer to other types for appropriate license.*

Washington State Department of Agriculture, Enforcement Action Definitions

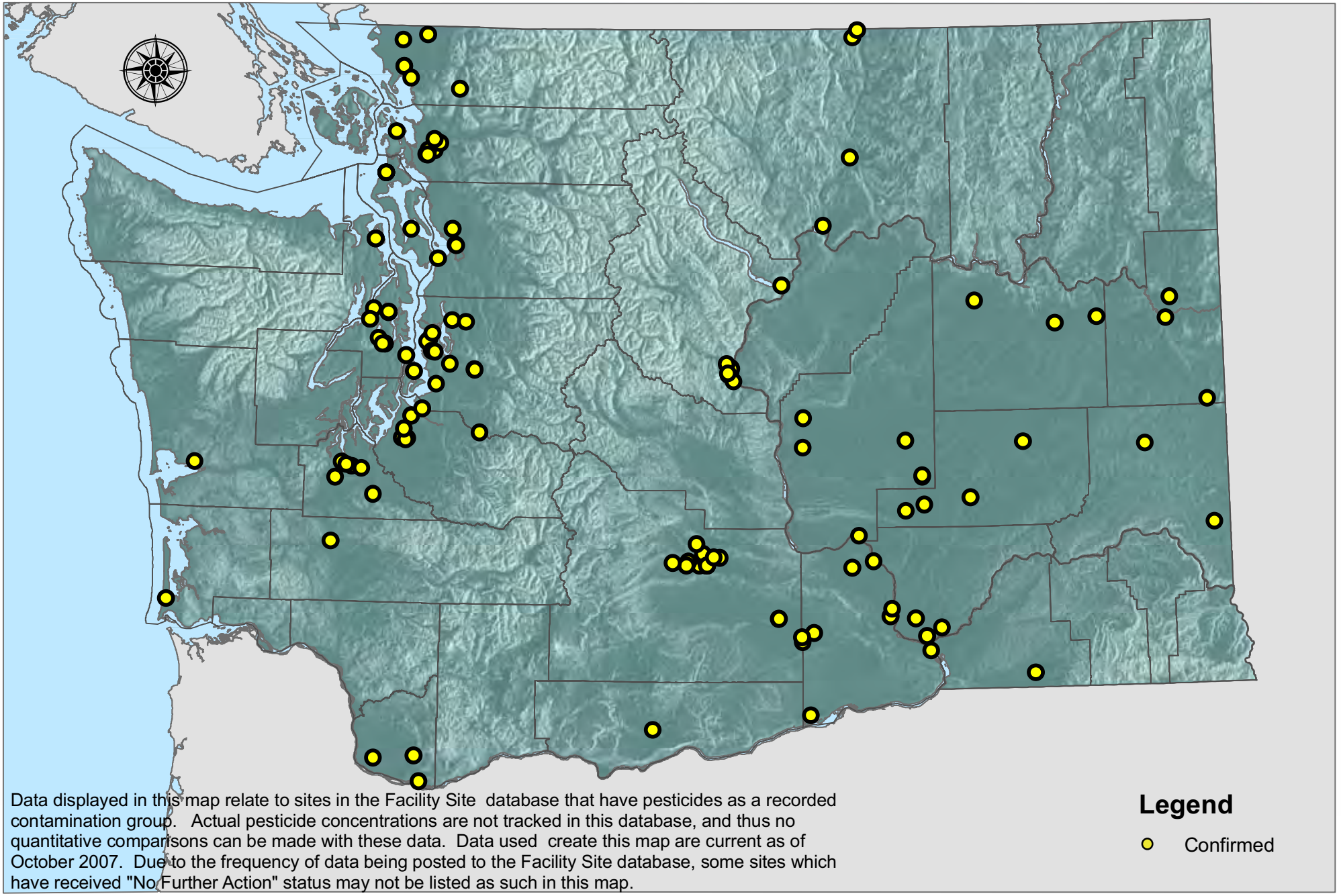
WSDA Enforcement Action Definitions

No action indicated	Not a pesticide complaint, or Not valid, or No violations noted, or No further action required.
Technical assistance	WSDA provided information only.
Verbal Warning	No evidence for further legal action but person was cautioned verbally by WSDA. No permanent record of warning.
Advisory letter/Warning letter	Some evidence of violation but not enough to take legal action. Person was warned to be more cautious.
Notice of correction	Notified that a minor violation must be corrected. Usually given thirty days. If corrected, no further action. If not corrected, further action is taken.
Notice of Intent/Administrative action	Usually results in a fine and/or license suspension for a varying interval.
Legal case Referred	Sent to another agency for action. The violation is not in WSDA jurisdiction.
Stop sale	Further sale of the product is prohibited until violation corrected. Generally an unregistered or damaged product.

Appendix E
Department of Ecology Maps

Active Pesticide Contaminated Sites (130) Through 2005

Washington Department of Ecology
Toxics Cleanup Program



Data displayed in this map relate to sites in the Facility Site database that have pesticides as a recorded contamination group. Actual pesticide concentrations are not tracked in this database, and thus no quantitative comparisons can be made with these data. Data used create this map are current as of October 2007. Due to the frequency of data being posted to the Facility Site database, some sites which have received "No Further Action" status may not be listed as such in this map.

Legend

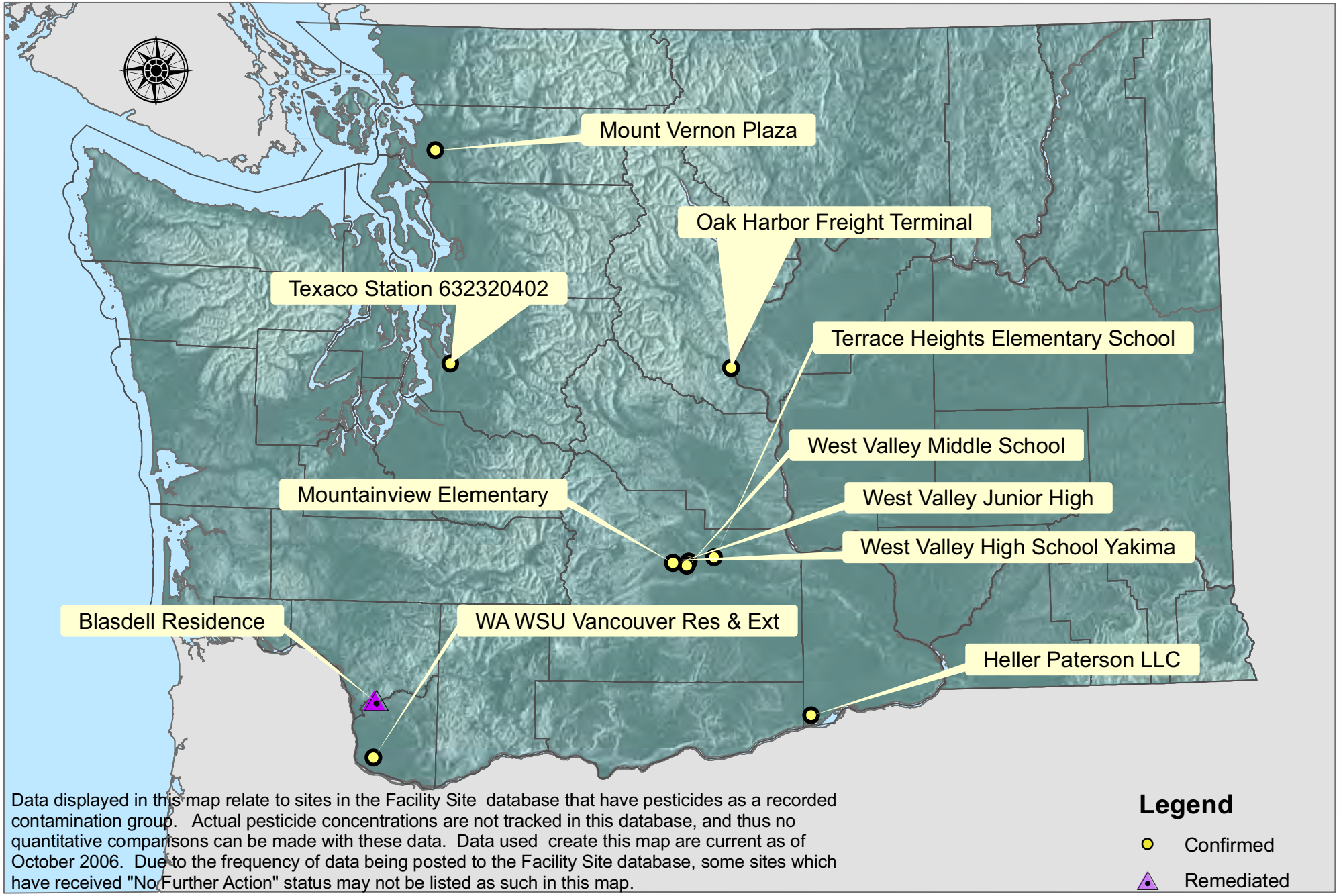
- Confirmed

y:\\..PIRT\PIRT_active_pesticides_in_2005

November 7, 2006

Pesticide Contaminated Sites
Added in 2005 (11)

Washington Department of Ecology
Toxics Cleanup Program



Data displayed in this map relate to sites in the Facility Site database that have pesticides as a recorded contamination group. Actual pesticide concentrations are not tracked in this database, and thus no quantitative comparisons can be made with these data. Data used create this map are current as of October 2006. Due to the frequency of data being posted to the Facility Site database, some sites which have received "No Further Action" status may not be listed as such in this map.

Legend

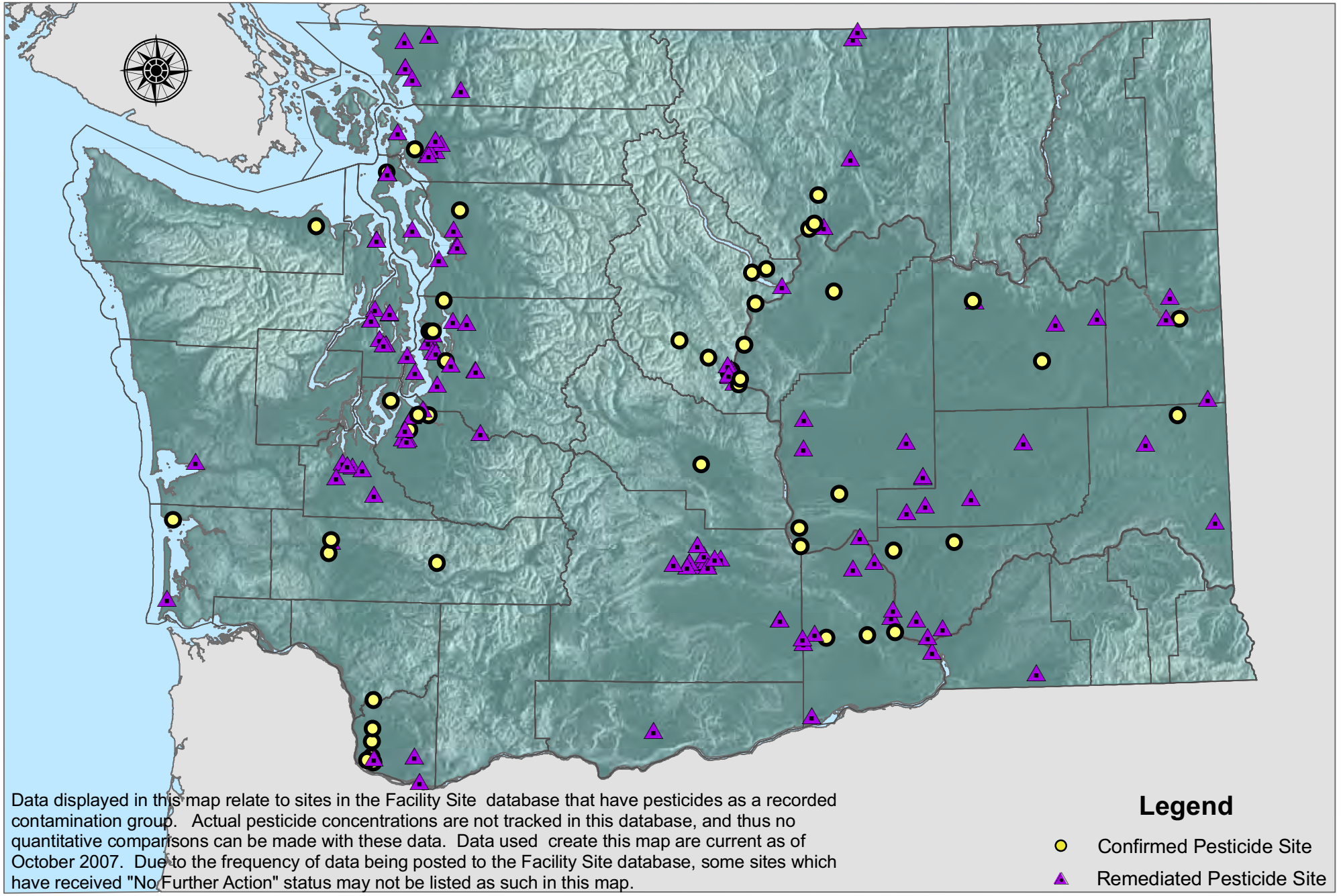
- Confirmed
- Remediated

y:\\..PIRT\PIRT_added_in_2005

November 7, 2006

Pesticide Contaminated Sites (195) Through 2005

Washington Department of Ecology
Toxics Cleanup Program



Data displayed in this map relate to sites in the Facility Site database that have pesticides as a recorded contamination group. Actual pesticide concentrations are not tracked in this database, and thus no quantitative comparisons can be made with these data. Data used create this map are current as of October 2007. Due to the frequency of data being posted to the Facility Site database, some sites which have received "No Further Action" status may not be listed as such in this map.

Legend

- Confirmed Pesticide Site
- Remediated Pesticide Site

y:\\..PIRT\PIRT_all_pesticides_in_2005

November 7, 2006

Appendix F
2006 PIRT Letters

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
Division of Environmental Health
Office of Environmental Health Assessments

234 Israel Road S.E. Town Center 3, PO Box 47846, Olympia, Washington 98504-7846
Tel: 360.236.3184 Toll Free: 1.877.485.7316 FAX: 360.236.2251
TDD Relay Service: 1.800.833.6388

February 14, 2006

Matthew C. Keifer, MD, MPH
Department of Environmental and Occupational Health Sciences
University of Washington
Box 357234
Seattle, Washington 98195-7234

Dear Dr. Keifer:

As the chair of the Pesticide Incident Reporting and Tracking (PIRT) Review Panel, I wish to express the panel's support for your research efforts to identify and characterize causes of cholinesterase depression among pesticide handlers in Washington State. We understand that you will be submitting a proposal to NIOSH as part of the PNASH renewal which will be focused on this topic. With over ten years of experience in surveillance of pesticide-related illnesses in Washington, we recognize the need for understanding what risk factors may lead to pesticide overexposure and how those factors can be prevented.

We also want to express our support for your research on the Test-mate cholinesterase kit technology for potential use in the clinical facilities that conduct cholinesterase testing in Washington. This kit may present a promising technology for future recognition of pesticide-related depressions. If proven, it will help clinicians provide quicker data and recommendations about lowering exposures to pesticides.

We wish you the best of luck with your proposal.

Sincerely,

Maryanne Guichard
Chair, PIRT Review Panel

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
Division of Environmental Health
Office of Environmental Health Assessments

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May 26, 2006

TO: Gary Weeks, Director
Washington State Department of Labor and Industries

FROM: Pesticide Incident Reporting and Tracking (PIRT) Review Panel

SUBJECT: Recommendations for the Washington State Cholinesterase Monitoring Program

The PIRT Panel has reviewed the changes proposed by the Department of Labor & Industries (L&I) for the state cholinesterase monitoring program. Currently, there are two major changes being proposed. One would end L&I's focused follow-ups on workplaces where there is evidence of over-exposure to cholinesterase inhibiting pesticides. The other would transition the analytical testing from the state public health laboratory to one or more commercial laboratories. Either of these changes could reduce the program's ability to identify and correct conditions leading to pesticide over-exposure.

In addition, L&I has indicated that the future of the Cholinesterase Stakeholder and Scientific Advisory Committees past 2006 is uncertain.

Tracking and investigating potential over-exposures to cholinesterase–inhibiting insecticides has great public health value. Washington should heed the experience of the California cholinesterase monitoring program, which was instituted in 1974. The California program lacks the structure for monitoring its performance and has run without oversight of its efficacy or accuracy for many years. Consequently, there has been nearly complete failure to use these valuable data for intervention and prevention. Recent efforts by California regulators to demonstrate the program's value have been hindered by the absence of systematic data collection (Das et. al.[1]). A recent examination of their laboratory quality found inadequate consistency and quality in cholinesterase testing by participating laboratories (Wilson et. al.[2]). Washington can and has done better. Central data collection of test results, analysis of program impact, and oversight of laboratory performance are key improvements over the California program and are in keeping with the Governor's emphasis on demonstrating efficacy of program expenditure.
The PIRT Panel members strongly recommend that this high value program be maintained by collecting data centrally and ensuring that current laboratory standards are maintained.

L&I should establish and implement a long-term process for tracking and reporting on core performance measures for the cholinesterase monitoring program. PIRT recommends the following core activities:

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[1] Das, Rupa. State of California, Department of Health Services. Personal communication about trying to track cholinesterase results through the California ChE system.

[2] Wilson BW, Henderson JD, Arrieta DE, O'Malley MA. Meeting requirements of the California cholinesterase monitoring program. Int J Toxicol. 2004 Mar-Apr;23(2):97-100.

1. Collect test results and maintain them in a central repository. PIRT would support continued operation of the Cholinesterase Monitoring Data System at the State Department of Health.
2. Track actions taken by employers when cholinesterase test levels show greater than 20 percent depression. Require employers to send L&I a copy of the report required by the rule to document actions taken (for example, what actions were taken, when, duration of worker removal). Monitoring workplace evaluations by employers in response to cholinesterase depressions, as required by the cholinesterase monitoring rule, is especially critical as L&I ends its intensive follow-up effort.
3. Track laboratory performance on Quality Analysis and Quality Control, turnaround time for the analysis, and turnaround time for reporting results to the central reporting system and health care providers. Any drop in performance should be investigated.
4. Maintain a database that tracks handling hours, pesticides used, equipment used, and job activities (mixer, loader, applicator, equipment repair) between blood tests.
5. Periodically assess enrollment of covered employees to better understand barriers to their participation in the monitoring program.
6. Implement a unique identifying number for each enrolled pesticide handler to assist tracking their test results.

PIRT also recommends that interested parties on the Stakeholder and Scientific Advisory Committees continue to participate in tracking the implementation of the rule through the transition to a commercial laboratory and to employer follow-up on cholinesterase depressions.
Finally, it is important that L&I fund and publish an annual report with results of testing so that the many interested parties can review the program outcomes, including the number of depressions detected, the percent of all tests that exceeded action thresholds, the number of employees with depressions, and the number of employers associated with depressions. The report should also include analysis of data for the elements 1-5 listed above. Information from the first two annual reports of the program have been used to re-evaluate and improve the personal protective equipment requirements on pesticide labels, to improve worker safety training, and to focus research attention on alternative pest control products and application methods. Continued reporting will ensure that data may be applied to improve policy and prevention activities.

Please contact me at your convenience if you would like to discuss these issues further or if you or any of your staff would like to attend one of our PIRT meetings. I can be reached at 360.236.3391 or email at maryanne.guichard@doh.wa.gov.

Sincerely,

Maryanne Guichard
PIRT Panel Chair

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
Division of Environmental Health
Office of Environmental Health Assessments

234 Israel Road S.E. Town Center 3, PO Box 47846, Olympia, Washington 98504-7846
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TDD Relay Service: 1.800.833.6388

June 13, 2006

Valoria Loveland, Director
Washington State Department of Agriculture
PO Box 42560
Olympia, WA 98504-2560

Re: Modification of the General Pesticide Rules, WAC 16-228

Dear Ms. Loveland:

The Washington State Pesticide Incident Report and Tracking Review (PIRT) panel sent a letter to WSDA dated November 10, 2005 that recommended adoption of the proposed modification to the General Pesticide Rules, WAC 16-228. The proposed changes require notification of the application of pesticides via aerial, airblast, fumigation (outside) or overhead chemigation applications when the application site and the property boundaries touch and the application is within one half mile of schools, hospitals, nursing homes, adult and child day care centers.

The PIRT Panel has since learned that a project may be implemented by WSDA to pilot the proposed changes.

The PIRT Review panel requests an update from WSDA on the status of the pilot project.

Sincerely,

Maryanne Guichard
Chair, PIRT Panel
Signed on behalf of the PIRT panel

STATE OF WASHINGTON

PESTICIDE INCIDENT REPORTING AND TRACKING REVIEW PANEL

243 Israel Road Southeast
P.O. Box 47846
Tumwater, Washington 98504 – 7846

December 28, 2006

Stephen L. Johnson, Administrator
US Environmental Protection Agency
Office of Pesticide Programs
401 M Street SW
Washington, DC 20460

Re: Support for petitions to disclose inert ingredients on pesticide labels

Dear Mr. Johnson:

The Washington State Pesticide Incident Reporting and Tracking (PIRT) Review Panel was established by the Washington State legislature to ensure that state agencies responsible for pesticide regulation coordinate their incident investigations, reporting, and education activities in a timely manner to protect workers and the public from pesticide misuse. The PIRT Review Panel consists of representatives from six state agencies, the University of Washington, Washington State University, the Washington Poison Center, a toxicologist and a member of the public.

The Washington State PIRT panel supports the petitions submitted to the Environmental Protection Agency (EPA) by the State Attorneys General and the Northwest Coalition for Alternatives to Pesticides, which requests that 381 substances already known and regulated as hazardous chemicals under other EPA statutory provisions be disclosed on pesticide labels. We find this petition to be a reasonable alternative to full disclosure of inert ingredients. The Panel advocates full disclosure of all ingredients on pesticide labels, including inert ingredients, as stated in the letter to the EPA from Washington State Department of Health, Division of Environmental Health, Office of Environmental Health Assessments. We realize that for a number of reasons, full disclosure of inert ingredients is not currently feasible, but we strongly recommend that the EPA work toward requiring this in the near future.

Users of pesticides have a right to know what they are purchasing and using to enable them to protect their health. This knowledge is also important for health professionals in diagnosing illnesses related to pesticide exposure, and for ensuring data quality in states that track pesticide-related health issues.

Thank you for your consideration of this letter.

Sincerely,

Rob Duff
Chair, Washington PIRT

cc: Tom Eaton, Washington State Attorney General

Appendix G
2006 DOH Letters and Publications

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
Division of Environmental Health
Office of Environmental Health Assessments

234 Israel Road S.E. Town Center 3, PO Box 47846, Olympia, Washington 98504-7846
Tel: 360.236.3184 Toll Free: 1.877.485.7316 FAX: 360.236.2251
TDD Relay Service: 1.800.833.6388

October, 6, 2006

Stephen L. Johnson, Administrator
United States Environmental Protection Agency
Office of Pesticide Programs
401 M Street SW
Washington, D.C. 20460

RE: Support for petition to disclose inert ingredients on pesticide labels

Dear Mr. Johnson:

The Washington State Department of Health (DOH) supports disclosure of all ingredients on pesticide labels. DOH monitored discussions in the Environmental Protection Agency's Inert Disclosure Stakeholder Workgroup meetings between 2000-2002 to better understand the barriers to full disclosure. We understand that listing ingredients and their percentages would create a commercial stress on pesticide registrants who are trying to protect their products from duplication by competitors. The Environmental Protection Agency (EPA) should pursue remedies such as allowing registrants exclusive use of their product for a limited period of time. This business model has been used in the registration of cosmetics and drugs and has allowed listing of ingredients without competitive harm[1].

In the meantime, the petitions submitted by the State Attorney's General and the Northwest Coalition for Alternatives to Pesticides are asking for a reasonable improvement in pesticide labeling. Substances already recognized and regulated as hazardous chemicals under other EPA statutory provisions should be disclosed on pesticide labels. According to the petitions submitted, this would add 381chemicals to the requirement for disclosure. Examples are naphthalene, dibutyl phthalate, xylene, methyl ethyl ketone, and sodium chromate.

We understand from our investigations of pesticide-related illnesses that disclosure of ingredients can be medically important. In our experience, more complete ingredient information on the pesticide label would: facilitate proper diagnosis and care of patients who are over-exposed to pesticides; improve the capacity of consumers to protect their health; and improve the accuracy of data generated by states who track illness related to pesticides.

Improving patient diagnosis and care
Our staff (five investigators) speak with many health care providers every year and see medical records for most of the cases we investigate. We notice that health care providers (HCPS) frequently seek information on the pesticide product ingredients. Some HCPs call a poison center to get more detailed

information on the ingredients. Some call the phone number listed on the label to get this information. Full listing of ingredients on the pesticide label would speed this process for the busy clinician. It would also ensure that clinicians have complete information, which is especially important for diagnosis and management of an allergy type reaction.

Other HCPs appear to assess patients only for the active ingredients listed on the label. We do not know whether this latter group may misunderstand the term “inerts” to “other ingredients protected by trade law” would clarify the situation for HCPs.

Improving capacity of consumers to protect their health
Public disclosure of all pesticide ingredients is also a good idea. Many consumers and pest control professionals have access to chemical-specific health information and could use this information to choose pest control products with the least potential to cause health problems. Disclosure of ingredients is especially beneficial for people with known allergies and other sensitivities. Listing of all pesticide ingredients would help them protect their health by avoiding ingredients to which they have known sensitivities.

Improving accuracy of state surveillance
DOH could use more detailed information on inert ingredients to improve our understanding and tracking of pesticide related illness. Our agency is charged with evaluating the poisoning cases we investigate for their probability of being related to the pesticide exposure. We are generally using the National Institute for Occupational Safety and Health (NIOSH) Sensor classification scheme, which considers how well we were able to confirm the pesticide exposure and the health symptoms reported, and considers how well the case fits with known patterns of adverse reactions to the pesticide involved. DOH tracks illnesses both by formulated product and active ingredients. Our data sometimes point to product “inerts” such as surfactants or solvents as the likely source of health impacts. Improved information about the other ingredients in pesticide products will help us more accurately evaluate cases and will result in better accuracy in the data reported from our program to the state of Washington Legislature, EPA and NIOSH
Thank you for your consideration.

Sincerely,

Rob Duff
Director, Office of Environmental Health Assessments
Work: 360.236.3181 Fax: 360.236.2251
Toll free: 1.877.485.7816

[1]Final Report to the Pesticide Program Dialog Committee on the Activities of the Inert Disclosure Stakeholder Workgroup, March 2000 through April 2002. April 23, 2002.

Washington Report

Preventing Pesticide Exposure through Illness Monitoring in Washington State

Joanne Bonnar Prado, M.P.H.

Washington State is a leader in protecting children, workers, and other state residents from exposure to toxic substances. Washington is one of nine states that actively tracks and investigates pesticide-related illnesses. Since 1970, the Washington State Department of Health (DOH) has investigated cases of pesticide illness and built a nationally recognized system to monitor and prevent these illnesses.

DOH uses pesticide illness data to support recommendations about pesticide policy and to educate health care providers, schools, and the general public. These data are important tools in preventing farmworkers and their families from being exposed to pesticides. Our Pesticide Program staff attend community health fairs and help train pesticide handlers who work at farms to avoid pesticide exposure. Our data are also used to strengthen consumer safety education. DOH's Web site informs schools about the hazards of using pesticides when children are present and encourages the use of safer pest control methods at schools and homes.

From 2000-2004, DOH investigated 709 cases of pesticide illness in the agricultural environment and 745 cases not related to agriculture. Farmworkers who apply pesticides are at greatest risk since they may work with concentrated forms of highly toxic pesticides. To detect the early warning signs of pesticide overexposure in farmworkers who handle pesticides, DOH public health lab partners with the Washington State Department of Labor and Industries (L&I) to monitor cholinesterase, an important blood enzyme. DOH alerts L&I and the worker's doctor if enzyme levels are abnormal so that the worker can be protected from further exposure.

DOH works with many partners to monitor and prevent pesticide illnesses in children and pregnant women. The Washington [State] Poison Center and the Washington [State] Association of Migrant and Community Health Centers contact us when pesticides may be involved in an illness. State and local agencies and community groups use the findings from these investigations to target their prevention efforts. DOH does not investigate chronic illness or latent exposure situations.

In 1989, the Washington State Legislature created a special multi-agency panel to monitor pesticide-related incidents. Representatives from several state agencies meet regularly with representatives from the University of Washington and Washington State University, the Washington [State] Poison Center, and others. The Pesticide Incident Reporting and Tracking Review (PIRT) panel centralizes information about pesticide complaints into one annual report, identifies illness trends or problem situations, and recommends preventions. A representative from DOH serves as chairperson of the PIRT panel.

If you suspect that pesticide exposure may have made you sick, you can report this directly to the DOH Pesticide Program. Contact information is available at the Web site. Health care providers and others may also contact the Washington [State] Poison Center to report an illness.

Joanne Bonnar Prado, M.P.H., is a public health advisor with the Office of Environmental Health Assessments, Washington State Department of Health. Ms. Prado was a member of the technical committees that developed the statewide chemical action plans for mercury and PBDE flame retardants. Currently, she works to evaluate and improve exposure prevention and health education activities.
Telephone: 360-236-3172
E-mail: joanne.prado@doh.wa.gov

Resources:

Washington State Department of Health, Pesticide Program
www.doh.wa.gov/ehp/ts/Pest/default.htm

Activities of the PIRT panel and annual reports of pesticide incidents in Washington
www.doh.wa.gov/ehp/ts/PIRT/default.htm

Washington State Department of Health, School Environmental Health and Safety Program
www.doh.wa.gov/ehp/ts/School/default.htm

Integrated Pest Management in schools and homes in Washington
www.ecy.wa.gov/programs/swfa/upest/

Pediatric Environmental Health Specialty Unit at the University of Washington
http://depts.washington.edu/pehsu/

Washington Poison Center
www.wapc.org/

Institute for Children's Environmental Health
www.iceh.org

Northwest Bulletin: Family and Child Health