

Agency Data  
2008

# PIRT

2009 Annual Report  
Pesticide Incident Reporting and Tracking  
Review Panel

Approved by PIRT Panel - April 15, 2010

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*We wish to acknowledge and thank our panel representatives for their contributions:*

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# **Pesticide Incident Reporting and Tracking Review Panel**

## **2009 Annual Report**

*A report to the governor, agency heads, the legislature, and the public as required by Chapter 380, Laws of 1989, and RCW 70.104.*

Approved by the Pesticide Incident Reporting and Tracking Review Panel April 15, 2010.

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# List of Acronyms

<b>DOH</b>	Washington State Department of Health
<b>DOSH</b>	Division of Occupational Safety and Health
<b>DPP</b>	Definitely, Probably, or Possibly
<b>Ecology</b>	Washington State Department of Ecology
<b>EPA</b>	United States Environmental Protection Agency
<b>HCP</b>	Health Care Provider
<b>L&amp;I</b>	Washington State Department of Labor and Industries
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>NOC</b>	Notice of Correction
<b>NOI</b>	Notice of Intent
<b>PCO</b>	Pest Control Operator
<b>PIRT</b>	Pesticide Incident Reporting and Tracking
<b>PUR</b>	Pesticide Use Reporting
<b>RCW</b>	Revised Code of Washington
<b>SPI</b>	Structural Pest Inspection
<b>UPEST</b>	Urban Pesticide Education Strategy Team
<b>UW</b>	University of Washington
<b>WAC</b>	Washington Administrative Code
<b>WDO</b>	Wood Destroying Organism
<b>WISHA</b>	Washington Industrial Safety and Health Act
<b>WAPC</b>	Washington Poison Center
<b>WPS</b>	Worker Protection Standard
<b>WSDA</b>	Washington State Department of Agriculture
<b>WSU</b>	Washington State University



# Executive Summary

## Introduction

The legislature created the Pesticide Incident Reporting and Tracking (PIRT) Review Panel to monitor pesticide-related incidents that have suspected health or environmental effects (Chapter 70.104 RCW). PIRT Panel members include representatives of six state agencies and the Washington Poison Center (WAPC) that respond to statewide pesticide issues, two university members, and two governor appointees: a toxicologist and a member of the public (Appendix A).

Member agencies conduct pesticide incident investigations in accordance with their statutory responsibilities and report findings to PIRT for evaluation. PIRT submits an annual report summarizing pesticide incidents to the legislature, governor, agency heads, and the public. This report presents individual and combined agency data for pesticide-related incidents that occurred in 2008 and a summary of the activities of PIRT and its member agencies for 2009. The report includes summaries of agency data and pesticide-related activities for 2008 by the Departments of Agriculture (WSDA), Ecology, Health, and Labor and Industries (L&I).

## PIRT Panel Activities

The panel met 13 times in 2009. Seven meetings were held in Tumwater, five in Tukwila, and one in Granger. The panel operated without an appointed toxicologist for 2009. Both the Department of Natural Resources (DNR) and WAPC had reduced participation in PIRT Panel meetings during the second half of 2009 due to decreased resources. Funding cuts within state government also led the state Department of Health to reduce its costs associated with PIRT in 2009 by cutting a previously funded “PIRT Coordinator” position and reducing administrative and technical support hours dedicated to PIRT.

PIRT activities included providing an analysis of House Bill 1946 (2007) comparing reporting systems in Oregon, California, and New York State in response to a legislative inquiry regarding pesticide use reporting. The panel evaluated and discussed agency PIRT data, and invited speakers to present on topics important to their work, including:

- *The Work to Home Exposure Pathway - Strategies to Protect Pregnant Women and Children*. Presented by Helen Murphy, Pacific Northwest Agricultural Safety and Health Center.
- *The Air Monitoring Study for MITC Fumigant*. Presented by Vince Hebert, Washington State University.

- *The Air Monitoring Study for Organophosphate Insecticides*. Presented by Michael Yost, University of Washington.
- *Assessing Impacts to Growers, Farm Labor, and Environmental Groups from the Phase Out of Azinphos Methyl*. Presented by Nadine Lehrer, Washington State University Tree Fruit Research and Extension Center.
- *Preliminary Results from Pesticide Air Monitoring Research*. Presented by Richard Fenske, University of Washington.
- *Land Use Change in Washington State*. Presented by Andrew Gray, USDA Forest Service, Pacific Northwest Research Station.
- *An Overview of 2003 – 2008 NIOSH Data Evaluation*. Presented by Barbara Morrissey, Department of Health.
- *Review of Environmental Protection Agency (EPA) Pesticide Program Dialog Committee*. Presented by Matthew Keifer, University of Washington.

## Potential Trends and Important Issues

### Potential Trends

*Incident Investigations.* Both the Department of Health and WSDA report fewer confirmed pesticide-related events in 2008 than in 2007. Department of Health confirmed 161 pesticide-illness events out of 310 events investigated — compared to 181 confirmed events in 2007. WSDA investigated 172 complaints during 2008, with 108 violations associated with the complaints (63%). WSDA data indicate a trend in reduction of pesticide related complaints that their agency has received since PIRT reports started (1990). Analysis of health department data show that, although dropping in 2008, the numbers of events confirmed as definitely, probably, or possibly (DPP) related to pesticide exposure has remained fairly constant over the past five years. Although department of health staff noted less confirmed pesticide-illness events overall in 2008 compared to 2007, the number of people involved was higher. This is because more events in 2008 involved multiple people than in previous years. Two large events involved 46 and 19 exposed people, respectively, and were associated with drift from agricultural pesticide applications. These and other drift events accounted in large part to the 24 percent increase in pesticide-related claims investigated by L&I.

*Drift Incidents.* Drift continues to be one of the most frequent types of complaints involving pesticide applications. In agriculture, drift complaints are approximately 75 percent of the violation cases. Most complaints with violations involved pesticides applied to orchards. Orchard settings intermixed with other crops, housing, and heavily traveled roads increases the potential for complaints. Pesticide products involved in drift events in 2008 were most often herbicides and fumigants.

*Type of Pesticides Involved.* Unlike previous years, there were no DPP cases investigated by state health staff among agricultural workers in 2008 involving the insecticides chlorpyrifos, phosmet, carbaryl, or Malathion. Azinphos-methyl cases, however, increased in 2008. Except for azinphos-methyl, WSDA and Department of Health data for 2008 point to possibly less-toxic pesticides involved in these cases, and together with data from L&I's cholinesterase monitoring program this year, may indicate reduced use of organophosphate insecticides in the state. It is too early to consider this a trend, and more years of analysis are needed. Use of azinphos-methyl will be discontinued in 2012 and will also cause changes in the types of products used for insect control and affect future data analysis.

There were serious events involving metam sodium fumigants in 2008. EPA is currently implementing new restrictions around use of this and other fumigants that should improve protection of workers and bystanders. Washington illness surveillance data and community air monitoring data were submitted to EPA, which cited it in its decision to increase public health protections. The risk mitigation measures proposed by EPA for a two-phase implementation program can be seen at: [http://www.epa.gov/oppsrd1/reregistration/soil\\_fumigants/](http://www.epa.gov/oppsrd1/reregistration/soil_fumigants/). Label changes for application rates and practices along with enhanced worker safety requirements will be implemented in 2010. Further restrictions including buffers and emergency preparedness will be implemented in 2011. All soil fumigants will be classified as Restrictive Use Products, requiring a license to apply.

With the exception of drift, complaints in 2008 continued to cover more diverse topics and a greater variety of pesticides than in the early years of the PIRT report. Applicators appear to be using more pest-specific products with a greater diversity of active ingredients and relying less on broad spectrum pest control products - with the exception of 2,4-D and glyphosate. These two herbicides were again the most frequently reported active ingredients in 2008, WSDA investigations. This is reflected in the number of different products involved in incidents and information received from educators and commodity associations.

*Cholinesterase Monitoring.* The number of pesticide handlers undergoing blood cholinesterase testing in 2008 increased by about 8 percent from 2007. Conversely, the number of participating employers continued its downward trend but appears to be leveling off. Participation in the monitoring program is voluntary for workers. Larger organizations tend to participate in higher numbers than smaller ones. L&I information suggests that this may reflect changes in industry pesticide use patterns; increased employer experience in identifying pesticide handlers covered by the L&I blood sample testing requirements of WAC 296-307-148, and improved employer actions that limit handler exposure (e.g., increased use of integrated pest management techniques). However, these and other potential influencing factors have not been studied. To achieve adequate levels of participation in agricultural pesticide handler cholinesterase monitoring, factors which encourage or discourage worker and employer participation in the program should be studied.

Although case numbers have fluctuated, the Department of Health has seen an average of about ten illness cases annually among handlers over the last ten years. The drop in cholinesterase-inhibiting insecticide induced illness cases among pesticide handlers to three cases in 2008 is notable.

### **Important Issues**

*Air Monitoring Studies.* The 2007 Washington Legislature allocated \$538,000 to the Department of Health to carry out contracts with the University of Washington and Washington State University to measure certain pesticides in the air of agricultural communities. Air monitoring studies focused on organophosphate insecticides in two regions of the state and on methyl isothiocyanate (MITC) in one region. These studies have been completed and all results are posted at <http://www.doh.wa.gov/ehp/Pest/driftresults.htm>. Department of Health staff is in the process of reviewing and interpreting these studies and anticipates having reports completed during the spring of 2010.

*Analysis of Factors that Contribute to Pesticide-Illness Among Agricultural Workers.* Department of Health completed a five year study funded by the National Institute for Occupational Safety and Health (NIOSH) to better identify contributing factors for pesticide illnesses and injuries among agricultural workers. From 2003 to 2008, the agency tracked 351 cases of agricultural workers with illness or injury plausibly related to occupational pesticide exposure.

- Of the 351 agricultural worker cases, 167 were pesticide handlers. This group showed a higher percentage of moderate to severe outcomes (14%) compared to other workers (10%). Fifty-six percent of the pesticide handlers (68) were without at least one piece of required personal protection equipment (PPE) or had another identified problem with their PPE (29



handlers). In 53 of the 167 cases, pesticide handlers appeared to have complied with the PPE requirements but were still over-exposed with resulting injury. In eight cases, handlers reported that while driving air-blast sprayers in orchards they were exposed on their face and neck when they turned the tractor at the end of the row. This is partly due to turning their heads to look back at the sprayer during the turn. They may also drive back through spray mist as they start the next row. This should be explored to determine if the directions and cautions on the label are sufficiently protective and how safety training may be improved. There were problems with the employer providing the correct PPE. Enhanced training for employers in this regard is recommended.

- The remaining 184 cases were other agricultural workers not specifically involved with pesticide handling. Pesticide drift was the leading factor in their over-exposure. The Department of Health evaluated 35 incidents in which three handlers and 101 other agricultural workers were exposed. All 35 incidents involved pressurized application equipment. Two-thirds of the incidents (23) involved ground sprayers in orchards. Twenty of 23 orchard incidents involved insecticide exposures; 70 percent of these were cholinesterase inhibitors. No other agricultural crop had more than two drift incidents involving workers. Data suggest that drift-related illness among agricultural workers should decrease with continuing efforts to replace the most acutely toxic products used on tree fruit and efforts to modify or replace air blast sprayers.

Based on this analysis of data, key worker protection messages and audiences for targeted prevention work have been identified. Agencies are in the process of identifying other prevention activities to address specific findings.

*Pesticides in Surface Waters.* From 2006-2008 Ecology and WSDA conducted a study of pesticides in surface water in five basins: Thornton Creek in the Cedar-Sammamish basin representing urban land use; the lower Skagit-Samish basin representing western Washington agricultural practices; the lower Yakima basin representing irrigated agriculture; and the Wenatchee and Entiat basins representing tree fruit agriculture. A total of 74 pesticides were detected during 2006-2008. Seven of these exceeded a water quality standard or assessment criterion. Pesticide concentrations found likely do not directly affect salmonids, but at some sites may affect aquatic invertebrate populations, a food source for salmon. Results were compared to 2003-2005 pesticide sampling results and the only trend identified was a significant decrease in herbicide detections for Thornton Creek, the urban site.

*Washington Poison Control Center.* Due to state budget reductions that were implemented in 2009, WAPC was unable to contribute a section to the report this year. Poison Center data are still being provided electronically to the Department of Health for pesticide illness case reporting purposes. The Department of Health has prepared this brief summary of WAPC data to highlight its importance in pesticide illness surveillance.

WAPC is a primary source of pesticide illness case reports to the Department of Health's Pesticide Program. Reporting from WAPC provided approximately 45 percent of the total cases that resulted in Department of Health investigations in 2008, and is normally the largest source of cases reported to Department of Health for investigation.

WAPC receives about 2,000 pesticide-related human exposure calls each year. These calls remained stable in 2008. Pesticide-related calls accounted for about three percent (2,027) of their total 67,575 human poison calls.

Department of Health conducted 310 pesticide illness investigations in 2008. Of these, 139 (45%) were WAPC referrals; 111 (78%) were determined to be definitely, probably, or possibly related to pesticide exposures. This rate of DPP cases referred by WAPC is higher than the overall rate of 52 percent. Reports from WAPC that are investigated by Department of Health tend to include precise medical care information, enabling the investigator to obtain medical record and exposure documentation. They tend to be single, rather than multiple-illness events. This makes it easier to document and classify as DPP. Sources like WSDA and L&I Claims Unit tend to report a higher proportion of the multiple-exposure agricultural related events than does WAPC. These types of cases may be more difficult to document and classify.

### **Priority Needs and Recommendations**

*Reduce agricultural pesticide drift.* Pesticide drift continues to be a major source of agricultural violations and illnesses. WSDA has been working with industry and EPA regarding drift reduction policies, training of applicators and adoption of products and application equipment that reduce drift. New nozzle regulations are also being implemented for reducing drift in eastern Washington. Agencies should continue to identify ways to prevent pesticide drift onto workers and adjacent properties. PIRT recommends support for Washington State University to research better management practices that reduce pesticide drift.

*Reduce pesticide exposure to agricultural workers.* The NIOSH five-year evaluation of factors that contribute to pesticide illness is providing essential information for effective prevention programs. PIRT supports the agencies in continuing to collect data and conducting analysis that addresses the findings of this study. While agency prevention efforts are effectively designed, barriers such as literacy, language, culture, trust, and the transient nature of migrant pesticide applicators and handlers still exists. More work is needed to bridge the barriers and engage agricultural pesticide handlers. The recommendations made in the Department of Health's *Contributing Factors* study regarding messages for specific audiences should be discussed fully among the education and outreach staff of the involved agencies, (Departments of Health, Agriculture, L&I) and "fact checked" and refined by the audiences for which they are intended. Worker input to prevention plans will help improve messages and may suggest additional strategies to reduce pesticide exposure and illness.

*Support Reduction of Air-Blast Sprayer Use.* Department of Health and WSDA data support moving away from air-blast sprayers in order to prevent pesticide related exposures and illnesses. PIRT recommends supporting and encouraging a phase-in of better technology and growing practices and phasing out air-blast sprayers as economics allow.

*Increase Prevention Efforts.* Agencies have put much effort in to collecting causal data around pesticide illnesses with the goal of carrying out data-driven prevention programs. Agencies should continue to focus on enhancing partnerships with other agencies and universities, completing the data analysis, and developing comprehensive prevention efforts. The amount and quality of cooperation among all the involved agencies continued in 2008, as reflected by the successful "co-investigations" of the large drift events mentioned.

*Ensure the provision of anonymity in complaints.* During focus group meetings with farm workers in the Yakima area in 2001, workers explained that they would not likely take time off from work to seek health care for mild to moderate symptoms. They are also unlikely to self report to a government agency, voicing concerns about possible risks to job security<sup>1</sup>. All agencies that investigate pesticide-related incidents should be aware of the special barriers that employees may face to reporting pesticide-related illness and seeking health care. Agencies should seek to increase the ability of workers to report complaints anonymously and include in their worker education efforts, discussion of the rights and ability of workers to report complaints. L&I should increase its level of unannounced inspections and continue to highlight the ability to file anonymous complaints-noting how to do this in Spanish and English on the L&I Web site and outreach posters.

*Secure a Reliable Means of Funding.* Many of the state-level pesticide activities rely on state general fund revenues. The budget crisis has already affected the capacity of PIRT agencies to carry-out their mandates. A significant portion of WSDA's pesticide program is supported by registrant and licensing fees. However, not all pesticide users are required to be licensed and the registration fee is a fixed amount, not based on the amount of product used within the state.

Funding models exist in other states that fund pesticide-specific public health and enforcement activities from pesticide sales taxes and pesticide registration fees. Agencies should explore options that realign costs of managing pesticide hazards in the state with industries profiting from pesticide use in the state. For example, the state of California uses a self-assessment program that assesses a fee on all pesticide sales, levied at the point of first sale into the state. (A "mill" is equal to one-tenth of a cent and the rate is set in statute). This "mill assessment" is currently 21 mills, or 2.1 cents per dollar of sales (\$2.10 for each \$100.00). Mill assessment revenues are placed in a special fund and used only to support the state's pesticide regulatory program. The cost to support the program is borne proportionally more by registrants that sell more in the state.

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<sup>1</sup> See "Improving Data Quality in Pesticide Illness Surveillance" June 17, 2004, at [http://www.doh.wa.gov/ehp/oehas/publications\\_pdf/improving\\_data\\_quality\\_in\\_pesticide\\_illness\\_surveillance-2004.pdf](http://www.doh.wa.gov/ehp/oehas/publications_pdf/improving_data_quality_in_pesticide_illness_surveillance-2004.pdf).

# Agriculture

*Washington State Department of Agriculture's summary of pesticide-related complaint investigations during 2008.*

## Background

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

The WSDA investigates all complaints it receives concerning possible pesticide misuse, storage, sales, distribution, applicator licensing, and building structure inspections for wood destroying organisms (WDO). The division also inspects marketplaces, importers, manufacturers, and pesticide application sites for compliance with state and federal laws and regulations on a non-complaint basis.

## Complaints

During 2008, WSDA investigated 172 complaints (Table 1). After investigation, WSDA determined that 121 (70%) complaints involved pesticide applications and 47 (27%) complaints were unrelated to actual applications. The application status of three complaints was not specified and one case was referred to another agency.

Examples of complaints unrelated to applications were structural inspections or licensing complaints. There were 108 violations associated with the 172 complaints (63%). This continues the trend in reduction of pesticide-related complaints the department has received since the PIRT report started. The first PIRT report which contained information on 1990 complaints showed WSDA investigated 408 incidents. The highest number of WSDA complaints received in one year since the PIRT reports started was 558 in 1992. Appendix C lists all WSDA pesticide-related complaint investigations for 2008.

**Table 1. WSDA Complaints and Violations, 2004 – 2008**

Year	Total Complaints	Violations
2004	200	122 (61%)
2005	193	113 (59%)
2006	206	137 (66%)
2007	177	104 (59%)
2008	172	108 (63%)

## **Location and Frequency 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 unlicensed applicators. Most Eastern Washington complaints were about agricultural applications, licenses and drift. Drift continues to be one of the most frequent types of complaint involving pesticide applications. However, complaints about potential misuse such as the wrong product used to control pests or complaints about a neighbor's use remain frequent. Licensing, records, notification and SPI/WDO inspections were the most frequent non-pesticide application complaints. With the exception of drift, complaints in 2008 continue to cover more diverse topics than in the early years of the PIRT report. This could partially be due to an increase in the diversity of pesticide related regulations that the department is responsible for enforcing since 1990. For example, the department enforces added regulations for Worker Protection Standards (WPS), Structural Pest Inspections and Chemigation requirements. Potential instances of misuse are diverse. Most are from residential areas and may be, for example, a neighbor using a pesticide to control weeds or trees that are obstructing views.

In 2008, there was only one complaint about a possible drift to bees. This complaint was settled without the department taking action as the complainant withdrew the case after settling with the applicator. Recent research from Washington State University has proposed that the loss of bees due to Colony Collapse Disorder may be from a combination of a new pathogen and a buildup of pesticides in old combs. Bee keepers are being advised to change out honey combs more frequently. Work continues on how best to manage the pathogen. Other research from the US Department of Agriculture suggests that multiple infections from a combination of viruses inhibit protein formation in the bees and that pesticides are not implicated.

In 2008, 103 (60%) of complaint investigations occurred in Eastern Washington and 68 (40%) in Western Washington. One complaint concerned a request to an out of state applicator for records.

In the top ten counties of the state with complaint investigations, 62 percent of the investigations were from Eastside counties although those same counties accounted for only 16 percent of the state population. Comparing the two counties with the most complaints, Grant County on the Eastside had approximately 1 complaint per 4,976 residents while King County on the Westside<sup>2</sup> had approximately 1 complaint per 110,835 residents. Statewide, the ratio was 1 complaint per 14,036 residents on the Eastside and 1 complaint per 75,616 residents on the Westside. As many complaints are about drift, particularly agricultural drift, and most Eastside complaints are about an agricultural application, these numbers support that drift is a prime driver for complaints to the department.

Table 2 lists the counties with the most complaint investigations from 2004 through 2008.

**Table 2. WSDA Counties with the Most Complaints, 2004 - 2008**

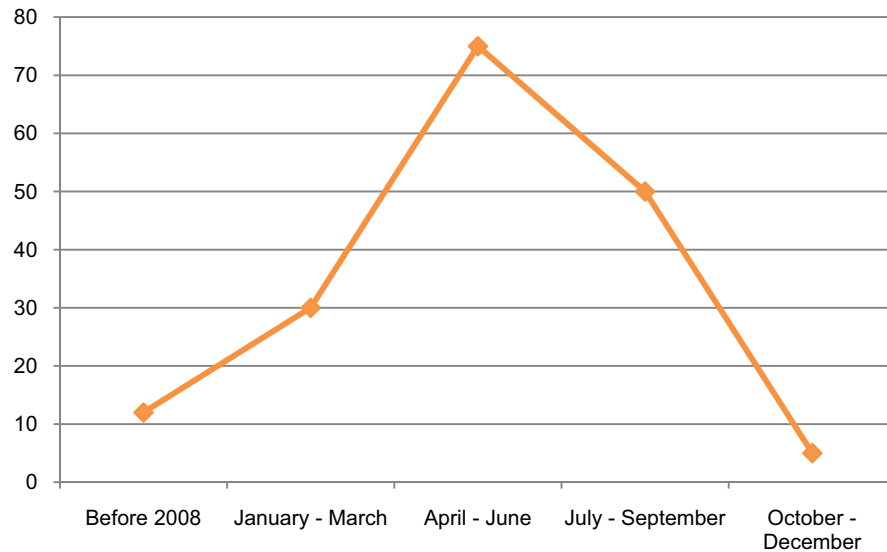
2004	2005	2006	2007	2008					
King	28	Spokane	22	Spokane	20	Pierce	14	King	17
Grant	20	King	20	Grant	19	Grant	13	Grant	17
Spokane	17	Chelan	18	Pierce	18	Spokane	13	Benton	16
Benton	15	Grant	16	Yakima	15	Snohomish	12	Yakima	13
Yakima	15	Yakima	12	King	13	King	10	Spokane	12
Walla Walla	11	Douglas	11	Douglas	11	Benton	10	Skagit	10
Pierce	11	Pierce	10	Okanogan	10	Yakima	10	Walla Walla	8
Snohomish	10	Benton	8	Franklin	9	Chelan	8	Pierce	7
Chelan	8	-	-	Whatcom	8	Whatcom	8	Franklin	7
-	-	-	-	-	-	Whitman	8	-	-

### Timing of Pesticide Related Complaints

The workload for investigations of complaints varies significantly during the year. In general, most investigators initiate case investigations within one working day of receiving the complaint. However, there is more variation that occurs as a factor of when the actual application took place. In 2008, 12 cases occurred before January, 2008 (the complaint was initiated with the department in 2008), 30 cases occurred January through March, 74 cases April through June, 40 cases July through September and five cases October through December. The date of one case was unknown although it was investigated in the spring.

<sup>2</sup> Population statistics from the Washington State Department of Financial Management for 2008.

**Figure 1. Incident Occurrence by Date**



### **Response Time**

In 2008, WSDA responded within one working day for 154 (89%) of the 172 complaints. All complaints about possible human exposure to pesticides were responded to within one working day.

### **Nature of Complaints**

Complaints for 2008 were categorized according to the nature of the initial complaint received. The categorization of complaints for 2008 is shown in Figure 2. 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 NOC 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.

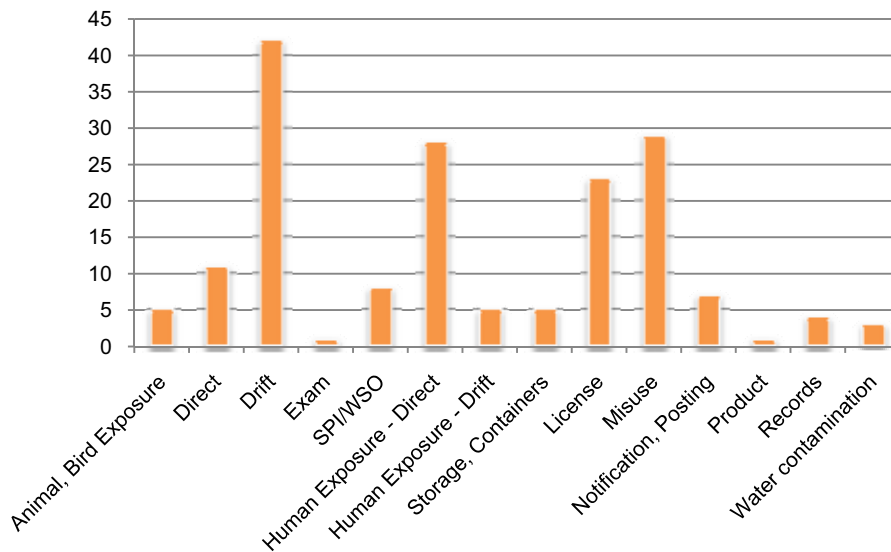


**Table 3. WSDA Nature of Initial Complaints by Number**

Animal, bird exposure	5
Direct	11
Drift	42
Exam	1
SPI/WDO*	8
Human Exposure -drift	28
Human Exposure-Direct	5
Storage, Containers	5
License	23
Misuse	29
Notification, Posting	7
Product	1
Records	4
Water contamination	3

\*Structural Pest Inspection/Wood Destroying Organism

**Figure 2. Initial Complaints by Category**



### Drift and Direct Human Exposure

In 2008, WSDA received 42 general complaints about drift plus 28 complaints specifically about human exposure due to drift. Of the 28 human exposure drift complaints, it was determined there was some evidence of exposure in fourteen cases, although two appeared to be odor only. Action was taken on seventeen cases, but not necessarily for the drift complaint.

Five Human Exposure cases were complaints about possible direct exposure. Three of these were determined as having evidence of exposure and action was taken on all three. A Warning Letter was issued on one although there was not conclusive evidence of exposure. Fifteen of the Human Exposure cases were related to agricultural applications, action was taken on ten. Two of these ten cases were exposure to fumigant applications and are detailed later in this report. Eighteen were non agriculture applications with action taken on eleven.

**Table 4. Drift and Human Exposure**

	Number of Complaints	Complaints Verified
<b>Drift</b>	<b>42</b>	<b>-</b>
To Property	20	7
To Crop/bees	13	10
To Ornamentals	6	3
To Car/Road	3	0
<b>Human Exposure</b>	<b>33</b>	<b>-</b>
From Drift	28	14
From Direct	5	3

For the 42 general drift cases, 29 were complaints about drift to property, ornamentals or vehicles, and 11 were complaints about drift to a conventional agricultural crop or pasture. Two additional cases were specifically about pesticide drift to an organic crop (Table 4). Pesticides moving off-target to people, crops or property appears to be one of the major reasons 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, or the person was concerned about possible drift rather than an actual exposure. Nonagricultural complaints from actual applications generally concerned damage to ornamentals from commercial applications or from a neighbor's application, rather than human exposure.

Non-licensed individuals and misuse are two other areas where WSDA received numerous complaints (Figure 2). In 2008, WSDA received 23 complaints about improper or no licensing and 29 complaints about direct misapplications or other types of misuse. The number of complaints specific to faulty SPIs continue to drop, with eight complaints investigated (in addition to complaints about improper SPI licenses or records).

There was one reported bee kill complaint for 2008. An insecticide was alleged to have drifted on leaf cutter bees. The complainant settled with the applicator and the investigation was dropped.

For the purposes of the PIRT report in classifying complaints, actions that the agency took may not be sufficient to determine the scope of actual pesticide incidents. For drift, WSDA needs evidence such as residue, symptoms, or actual observation to decide if drift had occurred or not. Even if drift was verified, the agency may not be able to take action; for example, if the source of the drift could not be proven. The number of verified drift cases may give a better idea of areas that are problems.

For 2008, 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. However, 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. In 2008, 105 (61%) cases had the original complaint verified (i.e., the complaint was valid).

Action was taken on 108 cases. One case was referred to the US Department of Agriculture. The percent of cases where action was taken on the original complaint appears to be leveling off around 60 percent each year. There are fewer complaints about damage that later are resolved as due to drought or insects than in the initial years of this report. This may reflect that people are better able to recognize pesticide damage as opposed to damage due to drought or insects or that damage overall is less frequent. It may also mean people have a better understanding of agency roles for enforcement. This means that the agency is able to better use resources by investigating valid complaints instead of responding to complaints about issues other than pesticides.

### **Application Methods**

In 2008, WSDA received 19 complaints about aerial applications, 99 complaints about ground applications, 50 complaints about items other than an application (for example, structural inspections), and 4 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 2008, 63 percent of WSDA complaint investigations resulted in some type of violation. Most violations were not severe in nature (Table 5) 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.
  - Forestry cases are listed separately and represent incidents that occur in forest tree production.
- Commercial/industrial: Incidents by licensed operators making applications to offices, restaurants, homes, and landscapes.
- SPI: A change in law established a separate definition for a license for this work. Replaces the previous WDO incident count. No pesticide applications are made.
- Residential: Includes any application of a pesticide in a residential environment by the homeowner, resident, or neighbor.
- Rights of way: 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.
- Schools – Incidents occurring on public or private school grounds.

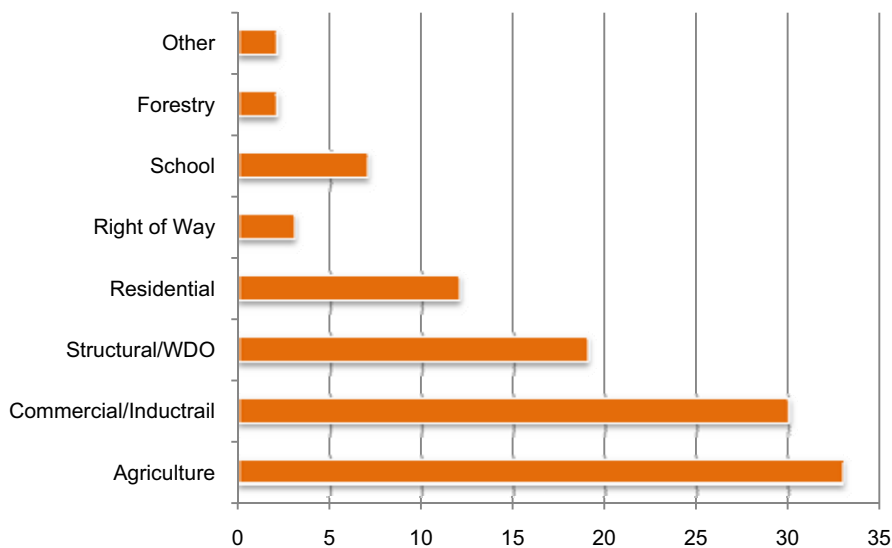
Table 5 shows complaints with violations by type of activity from 2004 through 2008.

**Table 5. WSDA Violations by Type of Activity, 2004 – 2008\***

Activity	2004	2005	2006	2007	2008
Agricultural	42	39	42	33	33
Commercial/Industrial	17	36	25	33	30
Structural/Wood Destroying	22	8	28	10	19
Residential (non commercial)	5	4	12	5	12
Right of Way	5	5	4	5	3
School	-	-	-	-	7
Forestry	-	-	-	-	2
Other	31	21	26	18	2
<b>Total Violations</b>	<b>122</b>	<b>113</b>	<b>137</b>	<b>104</b>	<b>108</b>

\*For 2008, Licenses and records were included in the industry in which the complaint occurred and other is for those items not in a particular industry. Also, incidents in forestry and schools were separated out.

**Figure 3. WSDA Violations by Type of Activity, 2008**



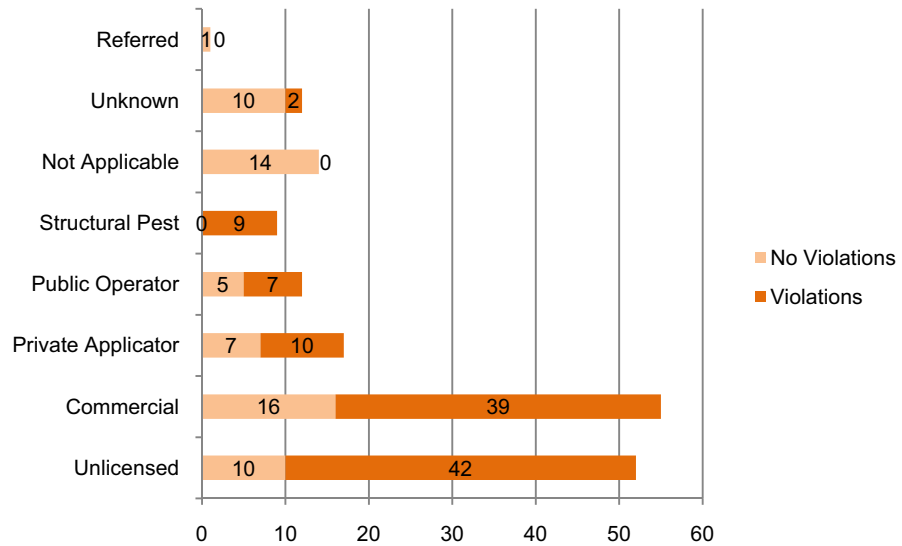
Violations alone do not give an accurate picture of pesticide exposures. For example, if drift occurs and the violator cannot be proven, no action can be taken. Sometimes the applicator has moved away, often out of state, and cannot be located. However, violations generally give a good representative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

### Type of License in Complaints with Violations

In 2008, WSDA licensed about 5,200 commercial applicators and operators and 11,900 private applicators. WSDA also issued about 8,800 other individual license types for a total of over 25,900 licenses. 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 2008, commercial applicators were involved in 55 complaints with 39 violations (Figure 4). Private applicators were involved in 17 complaints with ten violations. Unlicensed applicators were involved in 52 complaints with 42 violations.

**Figure 4. WSDA Type of Licensee Involved in Cases with and without Violations, 2008**



## **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 in the eastside of the state and may be on smaller acreages intermixed with other crops, housing, and heavily traveled roads. This increases the potential for complaints about possible drift. In agriculture, drift complaints are approximately 75 percent of the violation cases. The most frequent agricultural complaints in 2008 were from applications to orchards drifting on property or other crops (6) and drift to people (6). There were an equal number of violations about drift from applications to wheat (6). Drift from other crops to a crop (5) and to people (3) were the other reasons for complaints that had violations. After investigation, other reasons than the original complaint for assessing violations may be determined by WSDA.

## **Non-Agricultural Complaints**

In 2008, investigations due to improper or no license, recordkeeping and notification were the most frequent non-agricultural complaints (27). Inspections for Wood Destroying Organisms were also common (12). Generally, the complainant felt that the inspector overlooked conditions conducive to further structural damage. The most frequent type of violation cited by WSDA was failure to obtain the proper license type for the application (17). There were 12 complaints with violations about pesticides contacting a person and 20 complaints about pesticides contacting off-target property.

Complaint distribution has been consistent over the years and points to the need for greater education of applicators, particularly for drift reduction techniques. Applicators also must be aware of the need for licenses, especially for Wood Destroying Organism inspections and that they must be licensed in the proper category especially if they are making commercial applications. Some violations may reflect the transient nature of employment or lack of applicator training and some, particularly for SPIs, 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.

## Cases Involving Children

In 2008, children were involved directly or indirectly in ten cases.

**Table 6. Cases Involving Children 2008**

Case No.	Summary	Pesticide	Action
5	School personnel applied lice treatment to student's clothes. Three students reported ill.	permethrin	NOI
10	Family feels ill since 2007 after moving near orchard. Information only	None	NAI
11	Students in greenhouse not notified of application. No health symptoms.	herbicides	NOC
12	School did not notify of applications.	herbicides	NOC
15	Children at daycare drifted on by landscape application. No health symptoms.	Copper, mineral oil	NOC
40	Drift to property from orchard. Can smell and taste. Concern about son. No health symptoms.	sulfur	NOC
44	Student touched sidewalk where herbicide applied. No health symptoms.	Glyphosate dicamba 2,4-D	NOI
97	Child petted dogs that had contact with herbicides. No health symptoms.	Picloram 2,4-D	Warning letter
110	Aerial spray for mosquitoes drifted on campground. No health symptoms. Applicator did notify campground operator.	malathion	NAI
162	Fumigation drift	metam sodium	NOI –see case example

## Severity of Reported Complaints

The WSDA rates the severity of a case after complaint investigation is complete.

Table 7 gives a detailed description of each rating. As in previous years, the majority of complaints were assigned a severity rating of "2" or less.



**Table 7. Severity Rating of WSDA Complaint Cases, 2004 – 2008 Rating  
2003 – 2007 Criteria**

Rating	2004	2005	2006	2007	2008	Criteria
0	26 14.5%	29 15%	21 10%	29 16%	18 11%	Problem not due to pesticides and/or no cause determined; Structural Pest Inspection with no violations.
1	65 32.5%	77 40%	63 30%	54 31%	67 39%	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	83 41.5%	54 28%	92 45%	57 32%	52 30%	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	18 9%	16 8%	12 6%	25 14%	21 12%	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	8 4%	17 9%	14 7%	10 5%	12 7%	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	0	0	4 2%	2 1%	1 1%	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.
<b>Total</b>	<b>200</b>	<b>193</b>	<b>206</b>	<b>177</b>	<b>171</b>	<b>(plus one case referred)</b>

In 2008, of the 12 cases with a severity rating of 4, seven were issued Notices of Intent (NOI). Three were drift from applications to wheat. Two were from applications from contaminated tanks damaging plants. One was from a fumigation application drifting to persons. One was an application to mint drifting on a person. For the remaining five cases, Notices of Correction (NOC) were issued for damage to onions where no source could be determined but an NOC was issued on records, and an NOC was issued for improper use of a rodenticide. No action was taken on the remaining two cases as one was an accidental discharge and a source could not be proven on the other.

The case with a severity rating of five is detailed below. This case is similar to the corn residue fumigation case 166 -2008 that was given a severity rating of four except for the length of hospital stays. There is some question regarding the possible health effect on a baby but this has not been resolved as of the date of this report.

#### **Case 162-2008 – Severity Rating 5**

In October, 2008, a licensed Private Applicator applied metam sodium through a center pivot irrigation system to an approximately 150 acre field of corn residue. The field was to be planted at a later date. Thirteen people, including seven under the age of eighteen, went to the hospital. Eleven were treated for symptoms of headaches and nausea. Later that day, six more individuals in the area complained of odor or felt ill. (A newborn baby had a fever and was taken to the hospital the following day.) A first responder from the fire department went to the site and noticed what he termed as inversion conditions. He noticed a strong odor and experienced eye irritation. The houses and building where the people were exposed were approximately 250 feet from the edge of the treated field.

After investigation by both the Department of Agriculture and the Department of Health, it was found that the applicator had:

- applied during inversion conditions without taking precautions;
- did not post the field correctly;
- did not have the correct backflow prevention protection on the irrigation system;
- did not continuously monitor the application, and;
- did not shut off the end gun or corner systems during some periods of the application.

These violations led to the exposure and illness of nineteen individuals. The Department of Health classified the exposure as “definite” for three persons and “probable” for sixteen.

The case is currently in litigation.

### **Case 166-2008**

A similar case, 166-2008, also involved an October application of metam sodium to a field of corn residue by a center-point irrigation system. The application was made by a licensed Commercial Applicator. This field was a 133 acre circle. Four individuals were present and three reported respiratory symptoms and an odor. The fourth person was unavailable to be interviewed. One person was taken to the hospital for treatment of symptoms.

Eight fields, all within 1.25 miles or less of the complainant's home, had been treated with fumigants during a five day period prior to this incident. This application was 54 feet from the house at the closest point. The individual treated at the hospital had been working in her garden for two hours about one-half mile from the application. The Department of Health classified the exposure as two "probable" and two "insufficient information" (not available or did not wish to be interviewed).

After investigation, the Department of Agriculture found that the application was:

- made during inversion conditions;
- allowed to contact persons through drift;
- applied without taking precautions to seal the soil when odor was noticed; and
- applied without proper backflow prevention devices; which led to the exposures.

This case is currently in litigation.

### **Case 63-2008 – Azinphos-methyl Exposure**

Five field workers were exposed to an application of azinphos-methyl in May, 2008. The individuals were working in a new cherry planting and the application was to an adjacent cherry orchard. The application was made with an air blast sprayer by an individual working under the supervision of a licensed Private Applicator. All five workers reported illness symptoms and eventually sought medical care. The Department of Health classified all the exposures as "probable."

After investigation, it was determined that the pesticide was not used in accordance with labeling by allowing it to contact unprotected workers and that there were violations of the WPS, WAC 16-233.

The case is in litigation.

## Type of Pesticide Involved

In 2008, herbicides were involved in 78 complaints and insecticides in 22 complaints. There were relatively fewer complaints about other pesticides such as fungicides (10), fumigants (3), Growth Regulators (3) and rodenticides (2). This difference may be because these products are used far more frequently, 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.

Overall, complaints about applications in 2008 continue to show a greater variety of pesticides than seen in the early years of the PIRT report. There were three complaints about azinphos-methyl and two complaints about endosulfan drift. In addition, there were two complaints about metam sodium drift. These three products are labeled as "Danger/Poison." Complaint numbers for these products have been tracked closely because of their toxicity. The azinphos-methyl complaints were a human exposure drift complaint involving five farmworkers exposed to a cherry application, a drift from a conventional orchard to a organic orchard and a drift from an orchard to property. The endosulfan cases were a drift from an orchard to property and a direct contact with spray from an orchard at a residence near the application site. The metam sodium cases were drift from applications to corn residue to residential areas with numerous people involved. NOIs were issued for the endosulfan and metam sodium incidents, an NOC and two NOIs were issued for the azinphos-methyl incidents. Complaints on azinphos-methyl and endosulfan continue to be minimal and are anticipated to become even fewer as use of these products lessens. The use of azinphos-methyl will be discontinued in 2012.

Two serious incidents occurred with the drift of metam sodium from a fumigant application to a field with corn residues. These incidents were described earlier in this report (Pages 22 and 23).

Based on the numbers of different products involved in incidents and on information received from educators and commodity associations, applicators appear to 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 increases the spectrum of products involved in complaints and results in fewer complaints about only one product - except for 2,4-D and glyphosate. These products probably have a high frequency of use.

Herbicide drift constitutes the greatest number of complaints. Two herbicides, 2,4-D (24 complaints) and glyphosate (30 complaints), were again the most frequently reported active ingredients in 2008 complaint investigations (Table 8). 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 8. Active Ingredients Most Commonly Involved in WSDA Complaints 2008**

Active Ingredient	Number
Glyphosate	30
2,4-D	24
Triclopyr	9
Dicamba	8
Sulfur	6
MCPA	5

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 and people may be less worried about unknown effects. 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 NOC 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. Cases that may be taken to court are listed as NOI. The violator may pay the penalty as stated, or the violator has the right to appeal and take the case to court. The court may impose the fine and/or license suspension given by the agency or it might dismiss the case. As cases appealed may take several years to settle, all cases are listed as NOI in order to complete this report. Final settlement of these cases can be determined by contacting WSDA. 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 NOC was issued, the action would be listed as one NOC. However, if more than one type of corrective action was taken, such as a NOC and a NOI (which could happen if several applicators were involved in the same investigation), both types are listed.

The corrective actions taken in 2008 are listed in Table 9. (See Appendix D for definitions of the Enforcement Actions.)

**Table 9. WSDA Agency Actions, 2004 – 2008**

	2004	2005	2006	2007	2008
No Action Indicated	76	77	69	73	63
Verbal Warning	1	6	5	11	5
Warning Letter	4	9	12	5	13
Notice of Correction	98	76	93	60	72
Notice of Intent	20	23	22	26	18
Referred	2	2	0	2	1
<b>Total Actions</b>	<b>201</b>	<b>193</b>	<b>206</b>	<b>177</b>	<b>172</b>

## **Fines and License Suspensions Levied in 2008**

In addition to license suspensions, the agency assessed \$33,030 in fines for 22 court actions during 2008. (Note: because of the length of time to process cases through legal procedures, about half of these incidents occurred prior to 2008 and not all 2008 cases have been finalized.) The maximum fine was \$11,300 against a company that had failed to provide adequate safety for workers when pesticides were used at its orchards. The inspector found that there were numerous WPS violations and that this was a repeat offence. The minimum fine collected was \$0 in two instances. In one case, the individual is unable to apply for a license for two years as a result of trying to cheat when taking an exam. In the other case, the individual had his commercial operator license suspended for 30 days for falsifying records and other information for a house treatment. The average fine was \$1,376. Six fines exceeded \$1,000.

Except for the two year denial of a license, the maximum license suspension was 30 days (case detailed above). Another case, with a license suspension of 21 days and a \$3,200 fine, involved damage by an aerial applicator who damaged neighboring crops and residential landscapes during several herbicide applications. Most of the remaining license suspensions were for periods of two to seven days. There were a total of 13 license suspension actions.

## **Other Agencies Involved**

Washington State Department of Agriculture works in cooperation with other state and local agencies in collecting evidence and testimony. Cooperating agencies may independently report their involvement in these cases or they may do no further independent investigation.

In 2008, WSDA consulted with other state, federal and local agencies, including local police, in 48 investigations. The agencies most frequently consulted were: Department of Health (19); Ecology (9); Local police (9); Local health districts (4); and EPA (4). One case was referred to the US Department of Agriculture.





# Ecology

*Washington State Department of Ecology's summary of pesticide-related Spill Program complaints, Toxic Cleanup Program and Aquatic Pesticide Permits, and monitoring activities during 2008.*

## Background

Multiple programs within the Department of Ecology are involved in pesticide-related activities. Ecology works with 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 the overuse and misuse of pesticides.

This report presents data for four programs: Spill Prevention, Preparedness, and Response Program; Toxics Cleanup Program; Water Quality Program; and the Environmental Assessment Program. These programs track data on pesticide spills, on the cleanup of pesticide contamination, and on the use of pesticides to protect water quality, and monitor the impacts of pesticides to water quality.

## Spill Prevention, Preparedness, and Response (Spills) Program: Pesticide-Related Incidents

The Spills Program responds to pesticide-related complaints and is responsible for ensuring that damage from a spill is contained as much as possible and cleaned up as quickly as possible. Ecology uses the data from pesticide-related spills and complaints to identify where additional education is necessary to reduce the impacts of pesticides on human health and the environment. Summaries of the Spills Program pesticide-related complaints for 2008 are provided in Appendix C.

In 2008 there were 9 pesticide-related complaints involving threats to air, water, and/or soil. Spills 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. Investigations are initiated for complaints requiring field work, research, coordination with other agencies, or technical assistance.

Ecology responded within 24 hours in 100 percent of the 9 complaints in 2008. Ecology investigated all of the nine complaints.

Of the 9 pesticide-related complaints received by Ecology during 2008:

- 2 occurred in the agricultural environment.
- 4 involved commercial or industrial activities.
- 6 were reported by private citizens.
- 3 resulted in potential exposure to humans.
- 4 required some form of cleanup or removal of materials.

Table 10 lists the types of pesticide-related complaints received from 2001 to 2008. Complaints can involve more than one category of concern.

**Table 10. Ecology Pesticide-Related Complaints, 2001-2008\***

Type of complaint*	2001	2002	2003	2004	2005	2006	2007	2008
Pesticides threatening ground or surface water	11	23	13	10	23	10	8	1
Pesticide disposal or waste concern	14	12	12	6	2	9	6	4
Spills and fires	1	12	5	10	12	5	9	3
Unsafe pesticide storage or handling	6	11	10	3	5	10	3	3

\*Complaints may involve more than one category.

After Ecology Spills staff responds to and stabilize the initial emergency, the case is closed if it is determined that there are no long-term impacts. If there are long-term impacts, the case is referred to another program within the agency. When indicated, Ecology refers complaints to other state or local agencies. In 2008, the Spill Program referred seven complaints involving pesticides to Tribes, Department of Transportation, U.S. Environmental Protection Agency, city and county public works departments, Fish and Wildlife, and WSDA. Ecology immediately notified DOH of two incidents where humans were potentially exposed to pesticides.

### **Toxics Cleanup Program: Contaminated Sites Containing Pesticides**

Ecology 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 added to Ecology’s cleanup list, it remains on the list until it is either cleaned up or requires no further action. A site may be on the list for more than one year. Maps of pesticide-contaminated sites may be found in Appendix E.

In 2008 Ecology added seven pesticide-contaminated sites to the cleanup list bringing the total to 239 pesticide contaminated sites (Table 11). Of the sites added in 2008; five were within Yakima County, four of which were within the city of Yakima; and two were in Thurston and Grant Counties.

Of the seven pesticide-contaminated sites identified in 2008, Ecology designated four sites as active and undergoing cleanup, two as awaiting cleanup, and one as a non-active (remediated) site that was cleaned up or required no further action.

As of 2008 there were a grand total of 239 pesticide-contaminated sites statewide. Of those, 75 sites remained active in the cleanup process (awaiting clean-up) at year's end, there was no further action needed at 83 sites, and 81 sites were awaiting further investigation. Sites with no further action needed are considered clean in accordance with the cleanup standard for that site, or these sites have institutional controls (cleanup isn't possible so restrictive covenants are placed on the property), or these sites are in monitoring status. Sites in monitoring status are considered clean but one to two years of monitoring is required to ensure cleanup occurred.

**Table 11. Status of Pesticide-Contaminated Sites Statewide, 2008**

<b>Pesticide-contaminated sites</b>	<b>2008</b>
Sites undergoing cleanup at year's end	75
Sites with no further action needed	83
Sites awaiting further investigation	81
<b>Total pesticide-contaminated sites for the year</b>	<b>239</b>

### **Water Quality Program: Aquatic Pesticide Permits**

Ecology is delegated by the EPA to implement all federal water pollution control laws and regulations through the state's laws. These include the issuance of permits for the use of aquatic pesticides to protect water quality. The permitting process ensures that chemicals are applied sparingly and properly, thereby reducing the potential for exposure to natural resources and people. The data below is Ecology's pesticide use data in or near aquatic ecosystems.

#### **Aquatic Plant and Algae Management National Pollutant Discharge Elimination System (NPDES) Permit**

Table 12 contains the pesticide use reporting information for pesticides applied in lakes and ponds under Ecology's Aquatic Plant permit in 2008.

**Table 12. Aquatic Plant and Algae Management Permit, 2008**

Product	Pounds of active ingredient used
2, 4-D	9,638
Aluminum Sulfate	287,782
Calcium Hydroxide	90,058
Diquat	2,866
Endothall	1,946
Fluridone	322
Glyphosate	194
Sodium carbonate peroxyhydrate	852
Triclopyr TEA	2,174
<b>Total pounds of active ingredient applied</b>	<b>395,832</b>

**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. It allows the use of carbaryl, an insecticide in the carbamate family, to control burrowing shrimp in oyster beds. The data for 2005 through 2008 are shown in Table 13.

**Table 13. Oyster Growers Permit, Carbaryl Usage, 2005 - 2008**

Year	Acres treated	Pounds of active ingredient used
2005	576	3,629
2006	593	4,741
2007	555	4,438
2008	458	3,660

In 2007 and 2008 the Washington State Department of Agriculture issued an experimental use permit for use of imidacloprid. Imidacloprid is a neonicotinoid, which is a class of neuro-active insecticides modeled after nicotine. In 2008 35 pounds of the active ingredient for Imidacloprid were applied experimentally to 70 acres in Grays Harbor and Willapa Bay.

**Noxious Weed NPDES Permit**

The Noxious Weed NPDES Permit is issued to government agencies, homeowners, lake-advocacy groups, and marinas to treat fresh and saltwater environments for noxious, non-native plant species. The treated areas are located throughout Washington State. The product totals are listed in Table 14.

**Table 14. Noxious Weed NPDES Permit, 2008**

Product	Pounds of active ingredient used
2, 4-D	1,555
Diquat	287
Endothall	34
Glyphosate	23,869
Imazapyr	1,734
Triclopyr	199
<b>Total pounds of active ingredient applied</b>	<b>27,678</b>

**Fish Management NPDES Permit**

The Fish Management NPDES Permit is issued to the Department of Fish and Wildlife to apply rotenone for fish management in Washington lakes. In 2008, nine lake systems throughout the state were treated with a total of 580 pounds of active ingredient under this permit (Table 15).

Lakes and streams are chosen for rotenone application to remove undesirable fish species that are adversely impacting the growth and/or survival of preferred species (such as stunted populations of the exotic yellow perch that compete with rainbow trout fry; predation by exotic smallmouth bass on native westslope cutthroat trout, etc.), or are adversely impacting habitats of fish and wildlife populations (such as the degradation of water quality and aquatic vegetation by carp). The decision to treat with rotenone is made after all other alternatives to management of the undesirable species have been considered.

**Table 15. Fish Management NPDES Permit, 2008**

Water Body	Pounds of active ingredient used
Byron Ponds	46
Cee Cee ah Creek	3
North Potholes	60
TD2 Ponds	26
Frater Lake	52
Lake Ellen	146
Hatch Lakes	77
Williams Lake	133
Starzman Lake	36
<b>Total pounds of active ingredient applied</b>	<b>579</b>

### 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 the 97 Washington irrigation districts during the 2008 application season. The 16 districts include 81 percent of the total irrigated land in Washington. The amounts of active ingredients applied in irrigation systems are listed in Table 16.

**Table 16. Irrigation District NPDES Permit, 2008**

Product	Pounds of active ingredient used
Acrolein	175,436
Copper products	92,511
Fluoridone	392
Green Clean (sodium carbonate)	345
Xylene	41,003
<b>Total lbs. of active ingredient applied</b>	<b>309,687</b>

### Mosquito General NPDES Permit

To prepare for the arrival of West Nile virus, the number of groups treating for mosquitoes in Washington State rapidly increased. Ecology allows mosquito control districts and government agencies to apply for limited agent status under statewide blanket permit coverage issued to Washington State Department of Health. There were no violations of the mosquito general NPDES permit in 2008. Table 17 summarizes pesticide totals statewide for the 2008 application season.

**Table 17. Mosquito General NPDES Permit, 2008**

Product type	Pounds of active ingredient used
Bacillus spaericus (H-5a5b)	294
Bacillus thuringiensis israelensis (Bti)	27,761
Methoprene (all formulations)	860
Monomolecular surface film	62
Paraffinic white mineral oil	1,697
<b>Total lbs. of active ingredient applied</b>	<b>30,674</b>

## Surface Water Monitoring

### Surface Water Monitoring Program for Pesticides in Salmonid-Bearing Streams

The Departments of Ecology and Agriculture have a cooperative agreement for an ongoing study to investigate pesticide occurrence in salmonid-bearing streams. The focus of the study is to characterize pesticide concentrations in select salmon-bearing streams during a typical pesticide-use period.

**Monitoring areas and time frames are:**

- Thornton Creek, located in the Cedar-Sammamish basin represents an urban land-use area. Two to three sites have been sampled on this creek since 2003.
- Four subbasins of the lower Skagit-Samish basin were selected to represent western Washington agricultural land-use practices. The Samish River, Big Ditch, Browns Slough, and Indian Slough have been sampled since 2006.
- Three subbasins of the lower Yakima basin were selected to represent eastern Washington irrigated agricultural land-use practices. Marion Drain, Sulphur Creek Wasteway, and Spring Creek have been sampled since the start of the project in 2003.
- Five subbasins of the Wenatchee basin and the Entiat basin were selected to represent central Washington agricultural tree fruit practices. The Wenatchee River, Mission Creek, Peshastin Creek, and Brender Creek in WRIA 45; and the Entiat River in WRIA 46 have been sampled since 2007.

Surface water samples are analyzed for approximately 160 currently registered and historical-use pesticides and degradate compounds. Conventional water quality parameters measured include total suspended solids, pH, conductivity, dissolved oxygen, temperature, and streamflow. More information on this study and publications can be found at:

<http://www.ecy.wa.gov/programs/eap/toxics/pesticides.htm>.

A report on the 2006-2008 monitoring results can be found at Ecology's website at: <http://www.ecy.wa.gov/biblio/1003008.html>.

### **Other Pesticide Related Water Quality Studies**

- Copper is used as an herbicide in irrigation canals. In November 2007, Ecology began a sampling project to assess the impacts of copper on receiving water in the Wenatchee and mid-Columbia basins. Sediment and water column sampling was conducted during the 2008 irrigation season. A final report on this study can be found at Ecology's website at: <http://www.ecy.wa.gov/pubs/0903005.pdf>.
- In 2008 Ecology conducted monitoring for a one year study to evaluating chlorinated pesticides, polychlorinated biphenyl (PCB), and total suspended solids in the Yakima River. The purpose of the monitoring study is to: 1) assess the effectiveness of the 1997 lower Yakima River Suspended Sediment and DDT total maximum daily load study; 2) identify sources and quantify loadings of chlorinated pesticides, PCBs, TSS, and turbidity; 3) recommend numerical targets that will result in the river and its tributaries meeting water quality standards; and 4) propose wasteload and load allocations for sources, as appropriate. A draft report on this study can be found at Ecology's website at: <http://www.ecy.wa.gov/biblio/0903036.html>.



# Department of Health

*Washington State Department of Health's summary of pesticide-related investigations during 2008.*

## **Background**

The Department of Health Pesticide Program investigates reports of illnesses related to pesticide exposure. The agency uses data collected from these investigations to identify public health problems and develop strategies to prevent human exposure to pesticides. Federal and other state agencies, local government, advocacy groups, and legislators use the data for similar purposes.

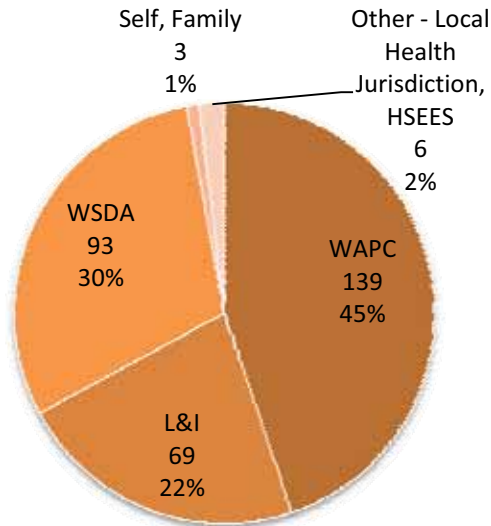
This Department of Health report on 2008 pesticide-related data describes sources of case reports, classification and severity of investigated cases, and the number and location of health investigations. The Department of Health presents data on occupational, agricultural, and non-agricultural cases here. The report also presents findings from an analysis of the factors that contribute to pesticide-related illness among agricultural workers. Conclusions and recommendations can be found at the end of this report.

## **Sources of Case Reports**

The Department of Health receives reports of suspected pesticide illness events from numerous sources, including Washington Poison Center, (WAPC) the Department of Labor and Industries (L&I) Claims Administration Program, the Washington State Department of Agriculture, (WSDA) health care providers, and others. More than one agency may report the same illness event. An event may involve exposure to one or more people. Each individual exposure is investigated by Pesticide Program staff members as a separate case.

Figure 5 shows the number of individual cases investigated, and the proportion of report sources, per case, based on the first report received by the state Department of Health.

**Figure 5. Source of Case Reports, 2008\***



**n = 310 cases investigated**

*\*Although some cases were reported by more than one agency or organization, DOH defines source by the first entity submitting the report to DOH.*

Electronic reporting from WAPC provided approximately 45 percent of the total reports, more than any other source. WAPC reports include the bulk of health care provider reporting since providers are instructed by Department of Health officials to report suspected pesticide cases through the WAPC. The second highest report source was WSDA, reporting 30 percent of the cases. The L&I Workers' Compensation claims unit provided 69 (22%) of first reports.

### **Case Investigation Criteria**

Any single event that is reported may involve multiple people who experience pesticide illness. The Department of Health reviews all referred reports, and investigates those that meet the following criteria:

- A pesticide exposure is reported.
- Symptoms are reported.
- At least one individual involved saw a health care provider.
- The pesticide exposure occurred during the last three months.
- The pesticide exposure occurred in Washington.
- The pesticide exposure was neither a suicide nor homicide attempt.

The Department of Health occasionally investigates cases of special circumstance even if all criteria are not met. Examples are unusual exposures to children, incidents involving multiple ill people, moderate to severe illness or injuries for which the individual did not seek health care, and cases referred by another state agency for co-investigation. Although many disinfectants are regulated as pesticides under federal law, Department of Health does not investigate disinfectant-related injury unless the product is specifically being used as a fungicide (e.g., sprayed on mold).

### Classification of Investigated Cases

The Department of Health’s Pesticide Program investigators interview individuals, obtain pesticide application and medical records, and, at times, conduct field visits. Investigators use these data to determine the likelihood that reported symptoms are related to a pesticide exposure. Investigators classify cases using documentation of exposure and health effects, and evaluation of the causal relationship. Department of Health uses the National Institute for Occupational Safety and Health (NIOSH) Case Classification System to distinguish between Definite, Probable, Possible (DPP). Other classification categories include Suspicious, Insufficient Information, and Unlikely cases (Appendix B). Minimum criteria for assignment to DPP classifications include symptoms are characteristic of known toxicological effects of the pesticide, and the time between exposure and symptom onset is consistent. Further description of DPP cases is provided in Table 18.

**Table 18. Classification Criteria of Definite, Probable, and Possible Cases**

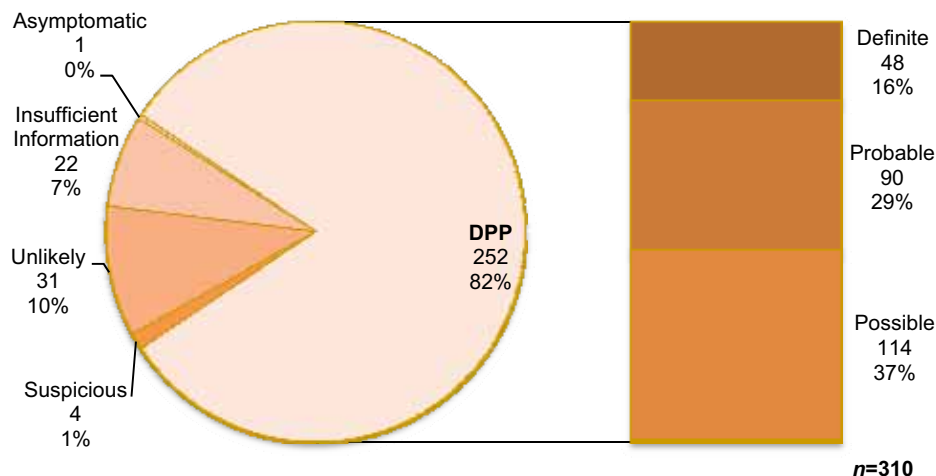
	Evidence of Exposure	Evidence of Health Effects
<b>Definite</b>	Laboratory, clinical, or environmental evidence corroborates exposure, and →	Two or more post-exposure health effects (one a sign*) or lab findings are reported by a licensed health care provider.
<b>Probable</b>	Laboratory, clinical, or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

\*Signs are considered objective evidence of illness and are observable on examination by a health care provider (e.g. low heart rate, cough, rash, depressed cholinesterase activity).

\*\*Symptoms are considered subjective evidence of illness and may not be observable on examination by a health care provider (e.g. headache, nausea, dizziness).

In 2008, investigators classified 252 (81%) of the 310 reported cases as DPP related to pesticide exposure. Figure 6 shows the classification of cases for 2008.

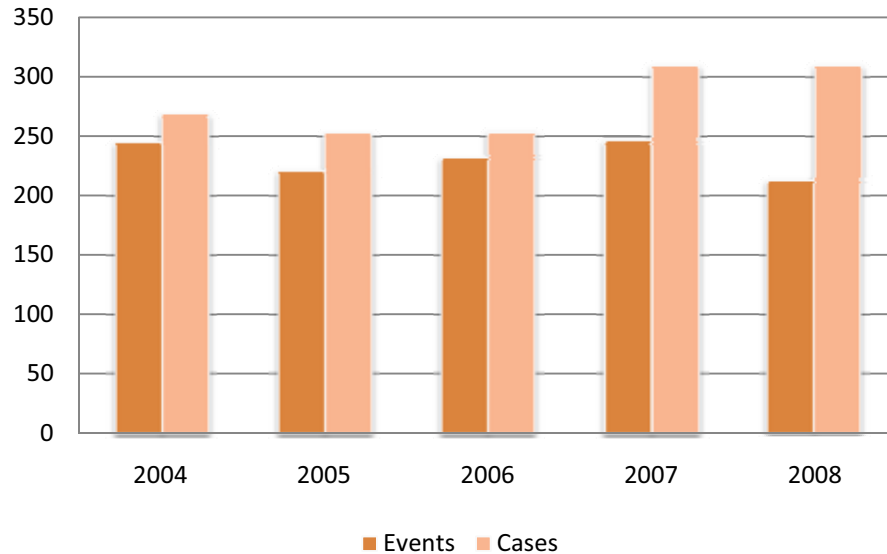
**Figure 6. Classification of Investigated Cases by Number and Percentage, 2008**



### Number of Investigations

During 2008, 213 reported events involving 310 cases (people) met the health case criteria and were investigated as suspected pesticide illnesses. Figure 7 shows the relative stability in the number of cases that annually meet health investigation criteria. The large number of cases relative to events in 2008 can be attributed to two agricultural drift events, one of which involved 19 cases and the other, 47 cases.

**Figure 7. Health Events and Cases Investigated, 2004 – 2008**



### Number of DPP Cases

After investigation, cases were classified as to the likelihood that pesticide exposure contributed to the reported symptoms. In 2008, there were 161 events that involved 252 DPP cases. Of the 161 DPP events, 143 (89%) involved one case, eight (5%) involved two cases, five (3%) involved three cases, (1%) involved four and one (0.6%) involved five cases. The two large drift events mentioned previously involved 46 DPP cases out of 47 cases investigated, and 19 DPP cases respectively, and accounted for a large portion (26%) of the DPP cases in 2008.

Although there were fewer DPP pesticide-illness events overall in 2008 as compared to last year, (161 events in 2008 as compared to 181 DPP events in 2007) the total number of DPP cases was higher this year (252) than in 2007 (207) or previous years (149 in 2006; 188 in 2005; and 204 in 2004). Again, the two large drift events contributed to higher numbers of symptomatic people in 2008.

Numbers of DPP cases for the years 2004 through 2008 are shown in Table 19.

**Table 19. DPP Case Classification, 2004 – 2008**

Classification	2004	2005	2006	2007	2008
Definite	63	49	21	36	48
Probable	55	48	39	63	90
Possible	86	91	89	108	114
<b>Total DPP Cases</b>	<b>204</b>	<b>188</b>	<b>149</b>	<b>207</b>	<b>252</b>
All Cases Reported	269	252	254	310	310
Percent DPP	76%	75%	58%	67%	81%
Percent Insufficient Information	14%	17%	22%	18%	7%

### Underreporting

The number of DPP cases documented by Department of Health is an underestimate of the actual number of pesticide-related illness and injuries that occur in Washington each year. The Department of Health surveillance system captures mainly cases that seek medical care and for which the health care provider either calls WAPC and/or files an L&I industrial insurance claim.

Many people with mild symptoms do not seek health care. WAPC data provides a limited measure of this. Most of the pesticide-related calls that WAPC reports to Department of Health through the Pesticide-Illness Electronic Reporting System (PIERS), are from people that did not seek health care. As such, they failed to meet criteria for investigation. Medical outcome of these calls were mostly coded by WAPC staff as “minor effect” or “not followed, minimal clinical effect possible.”

Occupational cases in the data set may also be under-represented. Workplace exposures are generally reported through L&I, not WAPC. During focus group meetings with farm workers in the Yakima area in 2001, workers explained that they would not likely take time off from work to seek health care for mild to moderate symptoms. They are also unlikely to self report to a government agency, voicing concerns about possible risks to their job security<sup>3</sup>.

In addition, there is under-reporting from health care providers.

- Providers may not recognize the symptoms as being pesticide-related.
- Providers may not know to report.
- Providers may decide that other clinical responsibilities take precedent.
- The patient’s employer may be self-insured so claims would not be submitted to L&I.

<sup>3</sup> See “Improving Data Quality in Pesticide Illness Surveillance” June 17, 2004, at [http://www.doh.wa.gov/ehp/oehas/publications\\_pdf/improving\\_data\\_quality\\_in\\_pesticide\\_illness\\_surveillance-2004.pdf](http://www.doh.wa.gov/ehp/oehas/publications_pdf/improving_data_quality_in_pesticide_illness_surveillance-2004.pdf).

Currently there is no good estimate of the extent of health care provider under-reporting in Washington. In a Department of Health study<sup>4</sup> completed in 2004, pesticide illness surveillance captured about 60 percent of occupational illnesses that sought medical care in the Yakima area and were given a pesticide-specific diagnosis. Farming employers are primarily insured through L&I, so the percentage of capture of health care visits for occupational pesticide-related injuries may be relatively higher in this region. No state studies have been done to estimate the number of health care visits for urban residential pesticide exposures that go unreported.

Passive surveillance programs never capture every case. Their strength is in capturing enough cases to understand what problems are occurring and why. The focus of the Department of Health pesticide illness monitoring is to collect data for targeted prevention. Although it is possible that this surveillance is missing significant cases, the program is documenting enough problem areas to be able to conduct prevention activities.

### **Severity of Medical Outcome**

The Department of Health uses the NIOSH Severity Index to classify signs and symptoms associated with pesticide cases (Appendix B). The “mild” category includes symptoms such as nausea, vomiting, shortness of breath, headache, dizziness, and skin or eye irritation. With mild severity cases, duration is relatively short: three days or less of time lost from work or normal activities.

“Moderate” illness or injury includes signs and symptoms that 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 (altered heart rate), slurred speech, or asthma attack. For moderate cases, time lost from work or normal activities is usually 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 often sustains substantial loss of time (more than five days) from regular work.

“Death” classification indicates a fatality attributed to pesticide exposure. These are infrequently reported in the state health data set. Health surveillance excludes intentional pesticide exposures (i.e., suicide and homicide).

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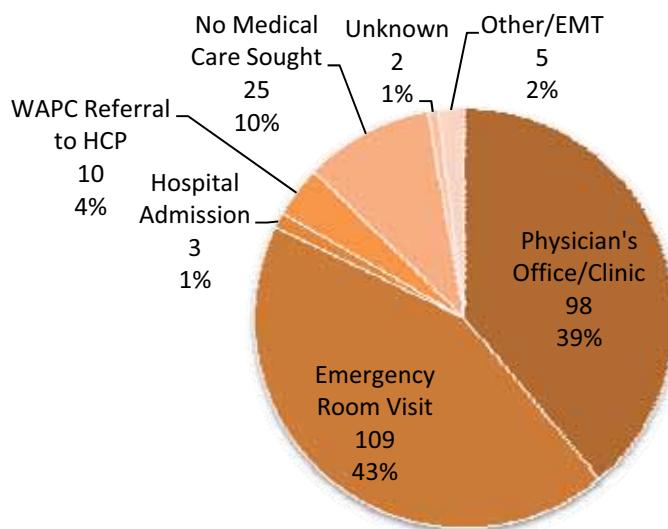
<sup>4</sup> See previous footnote.

Table 20 lists severity of medical outcomes for DPP cases from 2005 through 2008. In 2008, 227 (90%) of the 252 DPP Health cases were classified as mild. Twenty three (9%) cases were classified as moderate. There were two (1%) severe cases.

**Table 20. Severity of Medical Outcome, 2005 – 2008**

Severity	2005	2006	2007	2008
Low/Mild	161 (86%)	126 (85%)	181 (87%)	227 (90%)
Moderate	26 (14%)	20 (13%)	26 (13%)	23 (9%)
Severe	1 (0.5%)	2 (1%)	0 (0%)	2 (1%)
Death	0 (0%)	1	0 (0%)	0 (0%)
<b>Total DPP Cases</b>	<b>188</b>	<b>149</b>	<b>207</b>	<b>252</b>

**Figure 8. Type of Medical Care Sought, 2008 DPP Cases**



*n*=215 DPP cases that received medical care

Figure 8 shows the type of medical care sought for 2008 DPP cases. Of the 252 DPP cases in 2008, 215 (85%) received medical care for their symptoms. The majority of these were seen in the emergency room or in a physician's office or clinic. Five cases received care from an emergency medical technician (EMT) or other type of emergency health care professional. Three cases (1%) were hospitalized. WAPC referred ten cases (4%) to a health care provider, but they did not seek care. An additional 25 cases (10%) sought no medical care. The Department of Health investigated these cases because they were involved in events in which multiple people became ill, or because they had significant symptoms or were referred by another agency.



In each of these instances there was enough information about the exposure and symptoms to warrant investigations. Type of medical care sought was unknown for two cases.

The proportion of mildly to moderately ill people who sought health care in the Department of Health data set is skewed by the fact that the surveillance criteria selects for cases that sought health care. In fact, the larger data set from the WAPC shows that most people with mild symptoms do not seek health care.

### Location of Investigated Cases

The state Department of Health tracks location of incidents in order to target prevention activities geographically. Table 21 lists the ten counties with the most reported cases. Of the 252 DPP cases, 216 (86%) came from these ten counties. 69 percent of the state's 6.5 million people reside in these ten counties. Table 22 lists these counties with the most reported cases adjusted for the population of those counties.

**Table 21. Top Ten Counties with the Most Reported DPP Cases, 2008**

County	Agricultural	Non-Agricultural	DPP Cases	DPP Cases per 100,000 Population	Population*
Grant	54	4	58	68.56	84,600
King	0	35	35	1.86	1,884,200
Pierce	1	25	26	3.23	805,400
Franklin	22	3	25	35.61	70,200
Yakima	17	3	20	8.48	235,900
Snohomish	1	15	16	2.30	696,600
Spokane	1	10	11	2.40	459,000
Okanogan	6	4	10	24.94	40,100
Benton	7	1	8	4.83	165,500
Chelan	4	3	7	9.71	72,100

\*Population estimates are from Office of Financial Management, Forecasting Division, <http://www.ofm.wa.gov/pop/april1/finalpop2008.xlm>.

Grant, King, and Pierce counties have the most reported DPP cases. However, when the county population is considered, King and Pierce fall out of the top ten counties with DPP cases because they are more heavily populated.

Rural counties with smaller populations appear to have the most DPP cases adjusted for population. When using both methods, the counties of Grant, Franklin, Yakima, Okanogan, and Chelan remain in the top ten. Similarly, using both methods for previous years, Franklin, Grant, Okanogan, and Yakima counties are in the top ten for DPP cases in 2007 and Chelan, Grant, and Yakima counties appear in 2006.

**Table 22. Top Ten Counties with the Most DPP Cases per 100,000 Population, 2008**

County	DPP Cases per 100,000 Population	DPP Cases	Population
Grant	68.56	58	84,600
Garfield	43.48	1	2,300
Franklin	35.61	25	70,200
Okanogan	24.94	10	40,100
Columbia	24.39	1	4,100
Skamania	18.69	2	10,700
Adams	11.24	2	17,800
Chelan	9.71	7	72,100
Yakima	8.48	20	235,900
Klickitat	4.98	1	20,100

### Agricultural vs. Non-Agricultural Cases

Table 23 displays the distribution of cases defined as DPP by agricultural and non-agricultural setting from 2000 through 2008.

**Table 23. Annual Agricultural and Non-Agricultural DPP Cases, 2000 – 2008**

Year	Agricultural	Non-Agricultural	Total Cases
2000	113 (56%)	90 (44%)	203
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
2006	44 (30%)	105 (70%)	149
2007	60 (29%)	147 (71%)	207
2008	123 (49%)	129 (51%)	252

Agricultural cases occur when the pesticide application is intended for agricultural commodities such as fruit and field crops, nursery, livestock, and forest operations. Agricultural cases include exposure during pesticide handling, contact with drift or leaf residues from an agricultural application, and spills at agricultural storage facilities. Typical non-agricultural cases involve commercial and residential use of pesticides and include spills or splashes while opening and pouring pesticides, or wind blowing spray during the application.

### Seasonality

Tracking the peak months of incidents helps with the timing of prevention education and outreach to health care providers on recognition and management of pesticide illness. And this tracking helps other organizations know when to plan their activities (i.e., employee training, environmental sampling in streams for pesticide run off).

In 2008, 70 (28%) DPP cases occurred in April through June, and 115 (46%) occurred in July through September. Table 24 shows 2008 agricultural and non-agricultural DPP cases by season.

**Table 24. DPP Cases by Season of the Year, 2008**

	Agricultural	Non-Agricultural	Total Cases
January – March	3	19	22
April – June	33	37	70
July – September	64	51	115
October – December	23	21*	44
Unknown Exp Season	0	1**	1
<b>Total</b>	<b>123</b>	<b>129</b>	<b>252</b>

\*Includes one case with exposure occurring in 2007 and investigation completed in 2008.

\*\*Includes 1 where “season exposed” was unknown.

### Age and Gender

Thirty-five (14%) DPP cases involved children younger than eighteen years old. Fifteen of the children were under six years old, six were between ages six and 11, and 14 were between 12 and 18. Below are case examples.

- A one-year old had symptoms after an excessive application of insecticide foggers at his single wide mobile home. Three cans were activated inside and two underneath the home. Toys that were left out during fogging were not washed. The family re-entered the home after one hour and slept there that evening. (Severity: mild).

- A two-year old was sleeping in a tent when the tent was directly sprayed by an aerial application for mosquito control at 5:00 a.m. Campers were not notified of the application. (Severity: moderate).
- A four-year old pulled a towel from his head over his face and off, during lice treatment, and received a chemical burn to the eye. (Severity: mild).
- Three children ages nine, 12, and 13 developed health effects when a fogger was released in the basement of their home while they were upstairs. (Severity: mild).
- A one-month old baby, five children ages six and under, and two teenagers (and their parents) experienced symptoms when light winds blew fumigant vapors toward their homes. A temperature inversion occurred during the application. Unaware of what they smelled, the residents did not vacate the area. (Severity: mild).

Table 25 lists the age and gender of 2008 DPP occupational and non-occupational cases. In 2008 as in previous years, more males (93) reported occupational exposures than females (37). Males and females were about equally represented in the non-occupational DPP cases, although this year males also represented more of the non-occupational DPP cases (63) than did females (58).

**Table 25. Occupational and Non-Occupational DPP Cases by Age and Gender, 2008**

Age	Occupational		Non-Occupational		Total
	Female	Male	Female	Male	
0-5	0	0	5	10	15
6-11	0	0	1	5	6
12-17	1	1	5	7	14
18-29	11	34	9	7	61
30-49	18	45	19	14	96
50+	6	12	15	18	51 (+1*)
Unknown age	1	1	4	2	8
<b>Total</b>	<b>37</b>	<b>93</b>	<b>58</b>	<b>63</b>	<b>252</b>

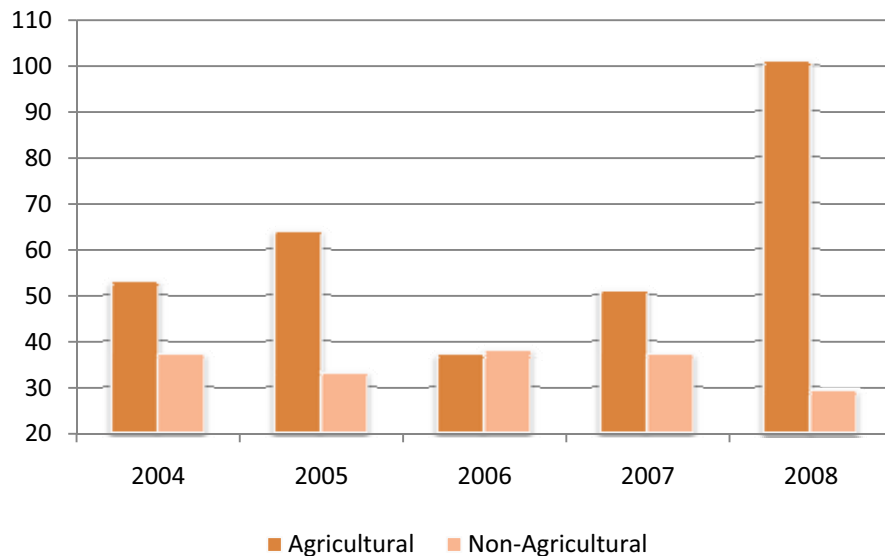
\*Includes 1 case of a 61 year old male whose occupational status was "unknown."

## Occupational Cases of Pesticide-Related Illness

There were a total of 130 DPP cases that involved a pesticide-illness resulting from exposures while on-the-job in 2008. This represents 52 percent of all DPP cases investigated, slightly more than last year.

A single large drift event involved 47 farm workers; 46 of these were classified as DPP cases. Three of the 19 cases exposed in a separate event involving fumigant drift were occupational-related, the remaining 16 were not. These events are described in more depth later in this report.

**Figure 9. Agricultural and Non-Agricultural Occupational DPP Cases, 2004 – 2008**



## Agricultural Pesticide Drift Events

Table 26 shows the number of drift events and cases (people) associated with agricultural applications for 2004 through 2008. The annual number of drift cases tends to vary as a single event can affect multiple people. The number of agricultural events has remained fairly steady in the last five years, though it dropped off slightly this year. Drift to workers usually, but not always, involves agricultural workers. Drift to non-workers generally involves people in their homes, driving on roads, visiting parks, or at schools.

**Table 26. DPP Cases of Agricultural Drift to Workers and Others, 2004 – 2008**

Year	Events	DPP Cases	Occupational	Non-Occupational
2004	13	16	5	11
2005	13	30	20	10
2006	12	16	9	7
2007	13	21	12	9
2008	13	83	62	21
<b>Total</b>	<b>64</b>	<b>166</b>	<b>108</b>	<b>58</b>

In 2008, there were 83 DPP pesticide-related illness cases involving drift from 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. The Department of Health classified these as definite (7), probable (34), and possible (42). In 2008, there were more drift exposures than any other single type of exposure for both occupational (62) and non-occupation (21) classifications (Table 27). Drift accounted for the source of exposure in 67 percent of the total DPP agricultural related cases. Direct spray during application was second largest source of exposure 20 (16%) of the DPP agricultural-related cases.

**Table 27. Agricultural Occupational and Non-Occupational DPP Cases by Source, 2008**

Source of Pesticide Exposure	Occupational	Non-Occupational	Total
Drift	62	21	83
Direct spray/dust during application*	19	1	20
Leak/Spill	4	0	4
Other	2	0	2
Unknown	3	0	3
Indoor Air	0	0	0
Surface/foliar residues	11	0	11
<b>Total Cases</b>	<b>101</b>	<b>22</b>	<b>123</b>

\*Can be direct exposure to the handler through contact with spray, dust or fumes; or overspray to a bystander. Also includes direct exposures that occur while mixing or loading pesticides.

### **Pesticides Involved in DPP Cases with Agricultural Exposures**

Thirty-two (26%) agricultural DPP cases involved exposure to an insecticide alone or in combination with other pesticides (Table 28). More than half (17/32) of the insecticides involved were cholinesterase inhibitors. Azinphos-methyl was associated with 14 ill workers in five incidents. Combinations of insecticides included acephate, methomyl, dimethoate, and methyl parathion. Unlike previous years, there were no DPP cases with chlorpyrifos, phosmet, carbaryl, or Malathion among agricultural workers in 2008. Combinations of other insecticides and pesticides included acetamiprid, spiroticlofen, quinoxyfen, hexythiazox, sulfur, and mineral oil. Fifty-eight cases involve herbicide exposure. Herbicide combinations included 2,4-D (4), paraquat (2), glyphosate (2), carfentrazone-ethyl (2), and dicamba, ethalfuralin, and triazine. Fungicides were tank-mixed with insecticides in seven cases and tallied under insecticide combinations with other pesticides. There were a total of 13 cases among agricultural workers that involved a fungicide exposure. Sulfur was the most common fungicide (five).

## Pesticides Involved in DPP Cases with Agricultural Exposures

**Table 28. DPP Agricultural Cases by Pesticide Ingredient, 2008**

Pesticide	Ag Handlers	Other Ag Workers	Bystanders, Including Non-Ag
<b>Cholinesterase Inhibitors</b>			
Azinphos-methyl	-	3	-
Azinphos-methyl combined with other pesticides	2	9	-
Combinations of other cholinesterase inhibitors with other pesticides	1	1	1
<b>Other insecticides</b>			
Imadicloprid	1	1	-
Acetamiprid	-	2	-
Gamma-cyhalothrin	-	1	-
Cyfluthrin	1	1	-
Pyrethrins	-	1	-
Endosulfan combined with other pesticides	1	1	1
Combinations of insecticides and other pesticides (no cholinesterase inhibitors)	3	-	1
<b>Herbicides</b>			
Clethodim	-	46	-
Alachlor	1	-	-
Orzalin	1	-	-
Paraquat dichloride	2	-	-
Herbicide combinations	5	2	1
<b>Fungicides</b>			
Sodium o-phenylphenate	1	-	-
Sulfur	1	-	-
Combinations of fungicides	1	3	1
<b>Other</b>			
Chloropicrin and Telone	1	-	-
Metam sodium/potassium	-	-	22
Gibberellins	1	-	-
Ethephon PGR	1	-	-
Hydrogen peroxide	1	-	-
<b>Totals</b>	<b>25</b>	<b>71</b>	<b>27</b>



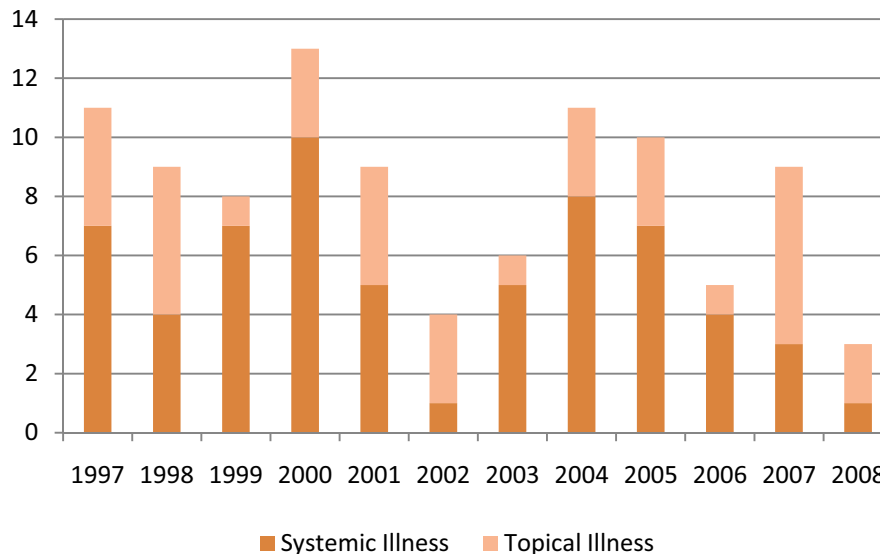
### **Cholinesterase-Inhibiting Insecticides**

In 2008, the Department of Health documented three DPP cases in pesticide handlers associated with cholinesterase (ChE) inhibitors and 13 DPP cases in other agricultural workers. Although case numbers have fluctuated between 13 and four, Department of Health has seen an average of about ten cases annually among handlers for the last ten years. The drop in cholinesterase-inhibiting insecticide involvement in pesticide handlers to three cases in 2008 is notable.

Department of Health asked for and received information from the L&I ChE Monitoring Program, pertaining to the cases of ChE depression below the action level (>20% below baseline). L&I reported that in 2008, there were no symptomatic cases identified by the monitoring program, and that 22 workers were identified as having asymptomatic ChE depression. L&I ChE Monitoring Program and Department of Health plan to cross-check data on identified ChE depression cases. Department of Health also plans to “back-check” the 2008 and 2009 investigation data with the L&I ChE monitoring program, to better understand the number of agricultural workers identified by Department of Health as likely ill as a result of ChE-inhibitor exposure, that were enrolled in the ChE monitoring program. This cooperative relationship between L&I ChE Monitoring Program and Department of Health’s Pesticide Program is detailed in a Memorandum of Understanding. By working together to cross-check the information collected about exposure to ChE inhibiting insecticides and ChE depression of pesticide handlers, Department of Health and L&I ChE Monitoring Program will improve their ability to evaluate whether workers that should have been in the ChE monitoring program were missed, or if possible health outcomes of ChE depression were overlooked.

Figure 10 shows the number of handlers that experienced systemic symptoms (which affects the body internally) and the number that had topical symptoms (i.e., skin or eye irritation) from 1997 to 2008. Since the cholinesterase monitoring program began in 2004, there is a decrease in systemic poisoning cases documented by the state Department of Health.

**Figure 10. Type of Illness and Injury for Handlers of Cholinesterase-Inhibiting Pesticides,\* 1997 – 2008**



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

## Non-Agricultural Pesticide Events

Department of Health documented 129 non-agricultural DPP cases in 2008 (Table 29).

**Table 29. Exposure Site for Non-Agricultural, Occupational and Non-Occupational DPP Cases, 2008**

Exposure Site	Occupational	Non-Occupational
Office, retail or service businesses	6	1
Park, camp, golf course	1	6
Public Transportation Vehicle	1	1
Residential building or grounds (home, apartment)	8	84
Road, right of way or vehicle	5	
School, prison, hospital / clinic	6	4
Other	2	1
Unknown	1	2
<b>Total non-agricultural pesticide use</b>	<b>30</b>	<b>99</b>

### Non-Agricultural Occupational

In 2008, of the 129 non-agricultural DPP cases, 30 (23%) of them occurred on-the-job.

Sixteen of the 98 non-agricultural, non-occupational DPP cases were exposed to applications by professional (paid) applicators (Table 30). The remaining 82 cases were due to applications made by home owners, landlords, and coworkers.

**Table 30. Target Pest for Non-Agricultural, Non-Occupational Cases Exposed to Pesticide Applications by Professional\* and Non-Professional Applicators, 2008\*\***

	Professional Applications	Non-Professional Applications
<b>Landscape/Garden Use</b>		
Insects	1	5
Weeds	4	12
Moss in Lawn		1
Plant Diseases	1	6
<b>Use In/Around Structures</b>		
Insects/Spiders	7	17
Moss on Roof		3
<b>Applications to People/Pets</b>		
Lice/Scabies Treatments		12
Fleas on Pets		3
Repellant		5
<b>Community - Wide Applications</b>		
Mosquitoes	3	
<b>Accidental/Non –Targeted</b>		
Unknown / Not Applicable		18
<b>Total</b>	<b>16</b>	<b>82</b>

\*Professional is defined as persons paid (licensed or unlicensed) to apply the pesticide.

\*\*Limited to cases with illness classified by Health as DPP due to pesticide exposure.

## Highlighted 2008 Pesticide-Illness Events Involving Multiple People

*Event Description: Aerial Application Drifts on 47 Farm Workers.*

Forty-seven apple harvesters age 18 to 61 sought medical care after reporting drift from an aerial herbicide application to an adjacent alfalfa field. The incident occurred while many of the workers were eating lunch at the edge of the orchard. Some reported feeling the spray; others only smelled it. Workers reported primarily headache, eye and upper respiratory irritation, and dermal and gastrointestinal symptoms. One worker was asymptomatic. Work was stopped and employees (18 females, 29 men) were sent to clinics in three nearby communities. WSDA investigated and detected residue of the herbicide applied on one of four clothing samples collected. Residues were also found for an insecticide applied to the apple orchard some time earlier for which the reentry interval had been met. Residues of two other pesticides were also detected on clothes of workers for which the origin was unknown.

CLASSIFICATION: 46 cases DPP; 1 case insufficient information

Severity: 46 mild

*Event Description: Transport of fumigant sickens rail workers*

A 32 year old male switchman foreman, a 46 year old locomotive engineer, and a 34 year old switchman assistant were transporting a tank car with 16,000 gallons of restricted use pesticide toxicity class 1 (danger) fumigant by rail to its destination, a tank farm 13 miles from the rail yard. All three men noticed an odor during the three-hour ride. In the final 30 minutes of the trip, stain marks were seen leaking from the top of the car, down both sides. They notified personnel at the tank farm and were taken to the hospital for evaluation and released. The local fire district responded to the scene, as did authorities with the railroad and the destination site. Department of Health Hazardous Substances Emergency Events Surveillance (HSEES), state Ecology, and EPA Region 10 were notified. A private company was hired to assess environmental impact, cleanup, and testing. The estimated amount of release was less than one gallon. Although hazmat responders were aware of the contents of the railcar, health care providers and the three workers were only aware of exposure to chloropicrin, not 1, 3 dichloropropene (81% of product). The workers reported respiratory, eye, and gastrointestinal symptoms in addition to severe headache. Some symptoms lasted more than a month after the exposure and all three men sought follow-up healthcare. Two cases were classified as definite and the third case was classified as probable. Severity ranged from mild to severe for the three workers.

*Event Description: Potato field fumigation during thermal inversion sickens nearby residents*

On a fall Friday afternoon, a strong odor consistent with fumigant vapors was reported in a residential area adjacent to a potato field. Department of Health was able to collect information on 16 of the 19 people who lived there. The 16 people included five children aged 17 days to six years, four children aged 12-18 years, and seven individuals aged 19-65. All 16 reported eye irritation. Tearing, headache, nausea, abdominal cramping, coughing, shortness of breath, and burning in the nose and throat were also reported. Twelve of the 16 sought health care for symptoms. In addition, two visitors and an emergency responder reported exposure and irritant symptoms but did not seek health care. This incident occurred during application of a soil fumigant, through the central pivot irrigation system, on a 150 acre crop circle across the road. It appeared that temperature inversion contributed to the off-site movement of vapors into nearby homes. Strong smell in the residential area also coincided with the pivot passing the affected houses. The residents did not see any posted sign or receive notification that the adjacent field was being fumigated. Residents called the police; the sheriff's office and fire department responded. Emergency responders did not shut down the application or notify WSDA of the incident. WSDA and Department of Health learned about the incident the following Monday and began immediate co-investigation. WSDA sampling found positive environmental evidence that the fumigant had moved off-site. Sixteen cases were classified as probable and three cases were definite. Two cases were of moderate severity, while the other 17 cases were mild.

## Contributing Factors to Pesticide-Related Illness Among Agricultural Workers (2003 – 2008)

Currently, Department of Health has a five-year grant from the National Institutes of Occupational Safety and Health (NIOSH) to better identify root causes for pesticide illness and injuries among agricultural workers. This is a supplemental grant to improve pesticide illness surveillance with an emphasis on understanding the root causes of improper personal protective equipment (PPE) practices and pesticide drift. The project has several components:

1. Monitor the frequency and nature of contributing factors for pesticide-related illness among agricultural workers. *Method:* Department of Health added questions in its regular interview to understand why exposures occurred and developed new coding to track responses. The agency also coded two pre-existing years of cases (2003 – 2004) using information in the case file.
2. Identify specific PPE problems that contributed to pesticide-related illnesses and injury. *Method:* Department of Health recorded as much detail about the specific nature of PPE problems noted in the case investigation and coded major categories of PPE problems and added text fields to record more detail about the cause of the problem.
3. Identify specific contributing factors in incidents involving pesticide drift. *Method:* Department of Health developed a one-year inter-agency checklist to solicit additional information on possible factors that contributed to drift to workers. Department of Health also added a text field to record as much detail as possible from its investigations and those of enforcement agencies during the other years of the grant.

### Findings

From 2003 through 2008, Department of Health documented 351 cases of agricultural workers with an illness or injury plausibly<sup>5</sup> related to occupational pesticide exposure (Figure 11). Medical outcomes were mostly mild in severity. Handlers had a higher percentage of moderate to severe outcomes (14%) compared to other workers (10%). Department of Health did not identify any deaths from occupational exposure among agricultural workers during this time period.

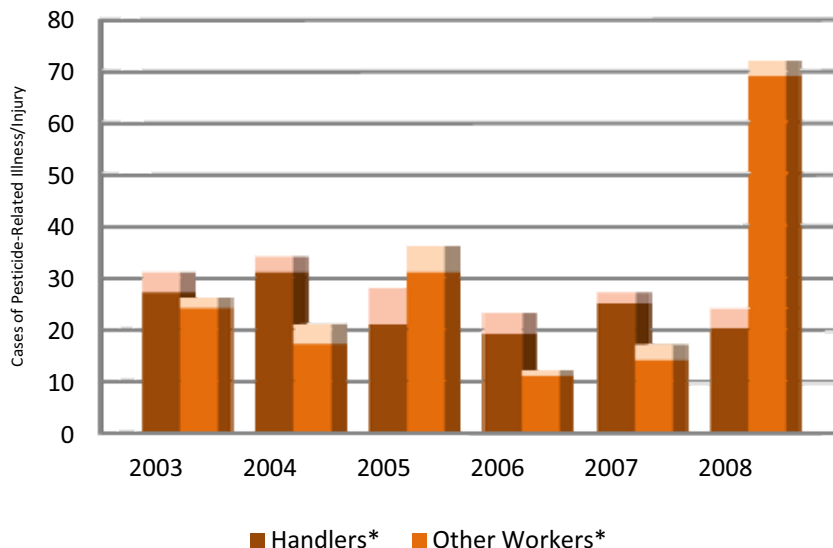
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<sup>5</sup> Cases of illness or injury classified by Health Pesticide Program as definitely, probably or possibly related to pesticide exposure.

Pesticides handlers were identified using the EPA Worker Protection Standard (WPS) definition of “handling.” Handlers were mixing, loading, or applying pesticides; cleaning or fixing contaminated equipment; or handling open pesticide containers. Other workers were harvesting, thinning, moving irrigation pipes or doing other agricultural work. Only cases classified as DPP due to pesticide exposure are included.

Department of Health is in the process of developing an agricultural worker protection plan for the 2010-2012 biennium. Based on the results of this study, specific activities to address and prevent the contributing factors that lead to pesticide-illness in agricultural workers will be proposed and initiated.

**Figure 11. Health Pesticide-Related Illness Cases Among Agricultural Workers from 2003 – 2008**



*\*The lighter shade represents workers with moderate to severe injury or illness.*

Department of Health tracked 16 different underlying factors that contributed to over-exposure (Table 31). Among pesticide handlers ( $n=167$ ), the leading contributing factors were lack of required personal protective equipment (PPE) and other PPE problems. Among other agricultural workers ( $n=184$ ), pesticide drift was the leading factor in their over-exposure.

**Table 31. Contributing Factors to Pesticide-Related Illness Among Agricultural Workers (2003 – 2008)\***

Contributing Factors Identified	Handlers (n=167)	Other Workers (n=184)
Posting or notification didn't occur	2	20
People were exposed in the treated area during application	1	15
Structure not adequately ventilated before allowing people to re-enter	1	0
Early re-entry	0	19
Required eye protection not worn	42	2
Other required PPE not worn	43	5
PPE in poor repair, not maintained, not worn correctly	29	1
Spill or splash (not involving equipment failure)	27	2
Product not stored properly/ within reach of children	0	1
Decontamination not adequate or timely	14	2
Intentional misuse of a pesticide to cause harm	0	1
Other label violations identified	8	4
No label violation identified but person still became exposed/ill	53	41
Equipment failure	22	2
Drift	3	101
Applicator not properly trained and/or supervised	24	7
Other	1	7
Unknown	15	7

*\*More than one factor can be coded for each case so the columns do not add to the total cases from each category of agricultural worker.*

The Department of Health analyzed contributing factors for handlers separately from other workers since these groups often access different venues for training in Washington. Handlers are educated mainly through pesticide license recertification classes and on-the-job training provided by licensed applicators. Other workers are reached through on-the-job training required by WPS, radio shows, community services, and health fairs. Employers may want to emphasize different prevention messages when training their handlers and their harvesting crews. Public health and worker protection programs at Department of Health, L&I and WSDA, may want to incorporate the prevention messages most specific to their outreach audience.



## Agricultural Pesticide Handlers (n=167)

### Personnel Protection Equipment problems that contributed to exposure (n=93 workers)

Fifty-six percent of handlers were missing at least one piece of required PPE (68 handlers) or had another identified problem with their PPE (29 handlers)<sup>6</sup>. Forty-two workers were missing required eye protection, and 43 were missing another piece of PPE: gloves (n=31), respiratory PPE (n=15), rubber boots (n=6), and apron when mixing (n=4). Seventeen workers were missing both eye PPE and another required piece of PPE. Four workers were missing at least one piece of PPE and also had a problem with PPE that they were wearing.

**Table 32. PPE Problems That Contributed to Exposure**

Contributing Factor Identified*	Total # workers with problem**		
Missing eye PPE	42	68 workers with at least one piece of missing PPE	93 workers with some PPE problem
Other required PPE not worn	43		
<b><i>PPE in poor repair, not maintained, not worn correctly</i></b>	<b>29</b>		

\*This represents only those cases where the missing PPE contributed to their exposure. If the person was missing eye protection but had an exposure on their foot, missing eye PPE would not have been coded as a contributing factor.

\*\*The last two columns adjust for multiple contributing factors coded for some workers.

Department of Health recorded a reason in 68 percent of the cases of missing PPE. The leading reasons given for missing PPE were that the employer didn't provide it (n=10) or that handlers otherwise did not think PPE was needed (n=9). In eight cases, the handler was wearing an inadequate type of PPE (i.e., sunglasses instead of safety glasses, cotton instead of rubber gloves). In seven cases, the handler removed PPE to clean a sprayer, fix a plugged nozzle, or scratch their face.

<sup>6</sup> This represents only those cases where the missing PPE contributed to their exposure. If the person was missing eye protection but had an exposure on their foot, missing eye PPE would not have been coded as a contributing factor.

**Table 33. Primary Reason Report for Missing PPE**

Primary Reason Reported for Missing PPE	(n=68)
Employer did not provide	10
Didn't think it was needed	9
Wearing wrong type	8
Label not explained/poorly supervised	2
Removed to clean or fix equipment	6
Did not wear due to heat	5
Removed to scratch eye/nose	2
Forgot to use	1
Other	3
Unknown	22

In 24/68 cases (36%), the worker was exposed while doing a handling task that was not strictly mixing, loading, or spraying but which is considered handling by WPS. Examples are cleaning application equipment after an application, fixing contaminated equipment, moving open containers, supervising a handler in the treated area, and unclogging a nozzle or adjusting valves midway through an application. Health investigators suspect that these workers were unaware that handler PPE was required for these tasks under WPS or were not motivated to wear PPE for tasks they perceived as having low risk of exposure.

Exposures to unexpected spill or splashes were co-factors in 26/68 cases (38%) in which the handler was missing required PPE. Half of these 26 cases were due to some type of equipment failure. This observation could be used to motivate workers to guard against unexpected splashes by wearing their PPE for all tasks where direct exposure is possible. Another co-factor identified in 26 percent of cases with missing PPE was lack of training and supervision. This would include cases where the supervisor did not provide PPE, did not instruct the handler to wear PPE, or did not provide initial training or instruction.

Twenty-nine handlers were wearing PPE with some identified problem. These were largely issues with respirators and goggles. In eight cases, the respirator cartridge was not changed frequently enough, or had an incorrect filter. Cartridge change-out problems were noted by Department of Health if the worker reported smelling chemical odors through the mask or long periods (days to weeks) between cartridge replacements. In four cases the handler was wearing a damaged respirator. In six cases the respirator had a poor fit and in five cases the goggles had a poor fit. Poor fit was coded if the worker mentioned that the seal of the respirator opened on the side when they turned their head, or that the goggles let mist or drips in through the seal. Poor fit was also coded if co-investigation by another agency documented an improper fit.

A “respirator fit-test” is required at least once to confirm that the brand and size of a worker’s respirator seals well over the shape of his face. In addition, a fit check is done each time the worker dons the respirator in order to detect improper seal due to loose straps, a faulty valve, or facial hair interfering with seal of respirator. The seal should not break when the worker moves his head in any direction. Many of the PPE problems identified could be addressed by attention to proper cartridge change-out and daily fit checking of respirators.

**Spill and splashes (n=49)**

Table 34 shows the cases for which spills and splashes were identified as a contributing factor. Cases are coded under two categories depending on whether failure of spray equipment was involved.

**Table 34. Spills and Splashes Identified as Contributing Factors**

Contributing factor	Applicators	Mixer/Loaders	Repair and Maintenance	Totals
Spills and splashes not involving equipment failure	6	15	5	27*
Equipment failure	14	1	7	22
<b>Totals</b>	<b>20</b>	<b>16</b>	<b>12</b>	<b>49</b>

\*Total for this row includes on an additional worker who was transporting pesticides.

Spills and splashes were factors in 29 percent of the handler cases. Nearly half (45%) were due to equipment failures. The most common problems for applicators were ruptured spray hoses (n=7) and hoses and valves failing when the tank pressure was increased (n=3). The most common problem for mixers and loaders was eye injury from splashes not involving equipment failure (n=11). In eight of these cases, the handler was missing eye protection. The most common exposures for workers repairing or maintaining equipment occurred when unclogging nozzles (n=6) and washing sprayers after application (n=5). Cases in which spray mist blew back on the handler during the application were not included under spills and splashes.

*Recommendation:* Protection from spills and splashes should focus on proper inspection and replacement of sprayer hoses, valves and nozzles; splash protection for eyes and face when mixing and loading pesticides; and ensuring that workers understand that cleaning sprayers and repairing valves and nozzles are handler tasks and require handlers PPE at a minimum. Handlers should wear splash protection for their face whenever they make adjustments or repairs to pressurized spray equipment. Increased adoption of closed mixing systems and water soluble packets would also minimize splashes during mixing.

### **Lack of training and supervision (n=24)**

Poor training or supervision was coded as a contributing factor in 14 percent of all handler cases. This probably underestimates the problem since we did not directly ask about training or supervision in most cases. These cases represent only the cases where the worker reported lack of supervision as a contributing factor (ten cases) or where Department of Health noted an obvious lapse in supervision or training. Often there were multiple errors involved. Examples are: supervisor didn't provide required PPE, worker continued to work in soaked clothing after pesticide leak because he was unaware of the chemical hazard, supervisor gave the handler unsafe work instructions, and handler was unable to read English and no one explained the label to him. Lack of training and supervision was often a cofactor with missing PPE (19 cases) or spills and splashes (8 cases). Twenty of these 24 handlers were not licensed.

*Recommendation:* Licensed applicators who supervise handlers should make sure all required PPE is worn and that handlers fully understand the potential for injury in their assigned tasks.

### **No label violation but handler still became ill (n=53)**

This code was used when the handler appeared to have complied with the PPE requirements but was still exposed with resulting injury. In a few cases, it appears that the handler had a sensitivity or allergic reaction to the spray. In 21 cases, the required eye protection did not protect the handler when a splash occurred or equipment broke. There are four ways to meet EPA's requirement for eye protection: safety glasses with side, brow and bottom protection; goggles; face mask; and full-face respirator. Safety glasses in particular were not effective in protecting against splashes or wind-blown spray mist.

At least one scenario was reported eight times and should be explored further to determine if the label is sufficiently protective. Handlers driving air blast sprayers in orchards frequently reported that they are exposed on their face and neck when they turn the tractor at the end of the row. This is partly due to turning their heads to look back at the sprayer during the turn. In addition, they may drive back through spray mist as they start the next row. This included one worker with 80 percent depression in ChE activity who was wearing a fit-tested respirator, full PPE, and whose only reported exposure was that he sometimes smells and feels chemicals on his skin at the end of the rows. The eight handlers are in addition to six workers (coded as having a PPE problem) who specifically reported that their goggles or respirators did not seal tightly to their face when they turned their heads at the end of the row.

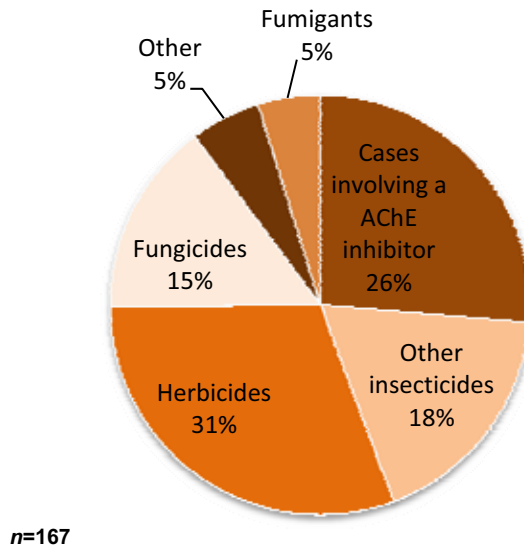
**Pesticide drift** (*n*=35 applications)

Pesticide drift was not a frequent cause of handler exposure but handlers are responsible to ensure that pesticides do not drift and contact other workers. Handlers and their supervisors should take note of the contributing factors for pesticide drift outlined on Page 69.

**Type of pesticide** (*n*=167 handler cases)

Forty-four percent of handler cases involved exposure to an insecticide either alone or in combination with fungicides and other pesticides. Over half of these insecticide cases involved exposure to an acetylcholinesterase (AChE) inhibitor such as chlorpyrifos, azinphos-methyl, phosmet, dimethoate, or carbaryl. Herbicides, such as glyphosate, paraquat, and 2-4, D, were involved with 31 percent of cases. Fungicides are frequently tank mixed with insecticides and are under-represented visually in Figure 12. Fungicides applied alone or in combinations were associated with 15 percent of handler cases. When the fungicides tank-mixed with insecticides is added, a total of 32 percent of the handler cases involved exposure to a fungicide. Common fungicides were sulfur compounds, mancozeb, and captan.

**Figure 12. Type of Pesticide Involved with Handler Cases**



*Other characteristics:* Handlers in this data set were 98 percent male, 83 percent Hispanic, and 73 percent preferred to communicate in Spanish. Median age was 33 with range of 16-74 years old. Most were exposed while applying pesticides (75%). Ten percent were mixing or loading at the time of their exposure, ten percent were repairing or maintaining equipment, three workers (1.5%) were transporting pesticides, and six workers (3.5%) were doing some combination of these handling tasks. Seventeen percent of handlers were licensed pesticide applicators, 57 percent reported to be working under the supervision of a licensed person, and 15 percent were not licensed. License status was unknown in five percent of the handler cases and not applicable in six percent of cases (i.e. no application taking place). Most frequent crops associated with handler cases were tree fruit (59%), potatoes (6%), hops (6%), berries (6%), nursery and ornamentals (5%), and grapes (4%) and cereal grains (2%). Ground sprayers were associated with 65 percent of handler exposures (i.e., the air blast sprayer). Backpack sprayers accounted for six percent, power sprayers with handheld spray lines (6%), and manual placement of baits or fumigants (5%). All other equipment categories were three percent or less including aerial applications.

### **Other Agricultural Workers (n=184)**

#### **Pesticide drift** (35 incidents involving 104 workers)

Drift from agricultural pesticides is a persistent source of documented illnesses. In this six-year period, 80 incidents involving 191 people were considered by Department of Health to be plausibly related to agricultural pesticide drift. More than half of these incidents involved drift to bystanders or workers outside agriculture. Thirty-five incidents, exposing three handlers and 101 other agricultural workers, are described below.

All 35 incidents involved pressurized application equipment. Five incidents involved aerial applications; the rest were ground sprayers. Two-thirds of the incidents (23/35) involved ground sprayers in orchards (e.g., orchard air blast sprayer). No other crop had more than two drift incidents involving workers. Since differences in acres planted do not explain the higher frequency seen in tree fruit, the factors that make drift-related illness more likely in orchards workers need to be understood. One possible explanation is the acute toxicity of the products used in orchards. Twenty of 23 orchard incidents involved insecticide exposures; 70 percent of these were cholinesterase inhibitors. Another factor may be the high pressure fan-shaped spray produced by the typical orchard air blast sprayer. Drift research has shown that fine droplets produced by this type of equipment are prone to drift. The data suggest that drift-related illness among agricultural workers should decrease with continuing efforts to replace the most acutely toxic products in tree fruit and to modify or replace air blast sprayers.

Other factors that appeared to contribute to drift were: proximity of workers to the spray equipment, inadequate communication, and in at least four incidents, windy conditions. In most of the drift incidents the workers could see or hear a sprayer nearby. In 12 of the 35 incidents, the reported distance between the worker and the sprayer was less than 50 meters or the worker was in the block or field being treated. In another 17 incidents, workers were in an adjacent block or field or at the edge of the block. When asked why workers were close to sprayers or in the same spray block, Department of Health often heard that they were not notified about the sprayer and were not sure they were permitted to leave their work when the drift reached them. In five incidents, the applicator saw the workers but thought he was a safe distance from them. In ten incidents, the sprayer worked for a neighboring farm. Farms should notify each other when treating their perimeter fields. Notification could help keep workers a safe distance from pesticide applicators.

**Workers Present in the Treated Area During Application (n=15)  
or Exposed During Early Re-entry (n=19)**

In 15 cases, workers were in the target area during the application. This resulted in exposure to direct spray or drift from nearby sprayers. Examples are a mechanic who was sprayed aurally while fixing an irrigation pump, farm workers who received direct spray when a speed sprayer passed one row away, and a dairy worker who worked in the same room as an automated insecticide mister. Poor communication or lack of notification appeared to be a factor in half of these cases. Examples include: a mower who was surprised when a sprayer began working in the same area of the orchard and an apple packer who received spray in her face when a sprayer passed one row away. Farms should maintain ongoing communication between pesticide applicators and other work crews to keep unprotected workers out of harm's way.

Early re-entry into a treated area was identified as a contributing factor in 19 cases (18 incidents). In several cases, neither the employer nor the workers were aware of the early re-entry before Department of Health compared the investigation notes with the pesticide application records. There were 11 early entries on 12-48 hrs Restricted Entry Intervals (REIs), and five early reentries on 14 day REIs. Again, communication problems appeared to be an underlying factor in 11 of 19 cases. Crop advisors and irrigators did not see posted signs, other workers reported that they did not see posted signs and were following verbal instructions from supervisors. In one case, a crew of workers had already been sent to an area when the employer realized that an REI was still in place and moved the workers. The workers had not noticed any signs. Fields need to be posted according to the label and WPS. Since field workers rely on verbal instructions from their supervisors, a central system of tracking needs to be maintained so that supervisors do not assign workers to areas that are restricted.



*Other characteristics:* Other workers in our six-year data set were 61 percent male, 89 percent Hispanic, and 82 percent preferred to communicate in Spanish. Median age was 32 with a range of 14-65 years of age. Workers were predominantly working in tree fruit (67%) at the time of exposure. Activity at the time of exposure was fruit harvesting (65 workers), thinning (28 workers), general orchard work (23 workers), nursery work (18 workers), irrigators (9 workers), field crop work (9 workers), fruit tree pruning (8 workers), and vineyard work (7 workers). One large drift incident in 2008 involved 46 fruit harvesters. If this incident is removed from the analysis, thinning is actually the most common activity among other workers associated with pesticide-related illness. Application equipment associated with exposures to other workers were 58 percent ground sprayers (mostly air blast sprayers) and 29 percent aerial sprayers. Again, 46 workers in one incident were exposed to a single aerial application. If this incident is subtracted, 89 percent of cases were related to ground sprayer equipment.

## **Limitations**

Information on contributing factors was largely collected through phone interviews with workers who had become ill or injured. The Department of Health did not routinely contact employers to confirm that the information was consistent with their understanding of the event. Since the worker is not initiating the call and often does not want state health staff to contact his or her employer, the agency is limited by information that is one-sided. Department of Health sees the pesticide application records and the findings of enforcement agencies if the case was co-investigated but the information should be considered incomplete. The information is collected for the sole purpose of guiding prevention.

## **Conclusions from 2008 Data and NIOSH Study**

### **Pesticide Drift**

In 2008, agricultural drift accounted for a disproportionately high number of illnesses per event compared to other sources of exposure. There were 18 drift-related cases documented this year, in addition to the 2 large incidents discussed in this report. Non-agriculturally employed bystanders comprised 26% of all the exposures plausibly related to agricultural drift in 2008. The details of the drift incidents documented in the Department of Health's investigations conducted in 2008, coupled with the expanded analysis of the previous six years of data, enable Department of Health to understand factors that contribute to agricultural pesticide drift. This understanding can lead to effective solutions. Preventable factors that contribute to agricultural pesticide drift are:

- Inadequate communication between applicators and other workers or neighbors.
- Proximity of application equipment to workers, roads, and homes.
- Use of equipment that is prone to drift (i.e., orchard air blast sprayer).
- Use of fumigant and other acutely toxic products.
- Application during unfavorable weather conditions.

More information about pesticide drift and air monitoring for pesticides in Washington can be found on-line, in English and Spanish, at <http://www.doh.wa.gov/ehp/Pest/drift.htm>.

### **Personal Protective Equipment**

Missing required PPE was a contributing factor in 41 percent of handler cases documented over a six-year period. Top reasons for missing PPE were that the employer didn't provide it; the handler didn't think it was needed for the task; and the handler removed PPE to clean or fix equipment. *Recommendations:*

- Employers need to provide all PPE required on the pesticide label and ensure their handlers wear it.
- Handlers need to wear handlers gear when cleaning and fixing contaminated equipment, moving open containers, transferring pesticides, or anytime they are doing tasks in an area being sprayed.

PPE problems such as poor fit, delayed change-out of respirator cartridges, and wearing damaged PPE, were documented in 17 percent of the handler cases over a six-year period. *Recommendations:*

- Many of the PPE problems identified could be addressed by attention to proper cartridge change-out and daily fit checking of respirators. Handlers should conduct a negative and positive pressure check every time they don their respirator.
- Both goggles and respirators should maintain their seal to the face when the handler's head turns to the side.

Although the NIOSH project focused on agricultural workers, the prevention data investigators collect is coded for every case. This information is important and its dissemination is crucial to prevention. Efforts are underway for 2009-2010 to share this information with health care providers and at trade association and other industry meetings. For example, Department of Health will present to health care providers at the 2010 Western Migrant Stream Forum. Department of Health has been coordinating with representatives from the Washington State Farm Bureau to provide this information to their constituents. There is ongoing collaboration with Washington State University, L&I, WSDA, and other agencies, to present Department of Health findings to pesticide handlers and agricultural supervisors.

### **Counties**

Longitudinal analysis of counties points to ongoing elevated health impact of pesticide use in Chelan, Franklin, Grant, Okanogan, and Yakima counties. Health plans to begin to address this by developing a county specific datasheet of pesticide-illness cases having occurred in these counties during the past year, and supplying that data to appropriate contacts within the local health departments representing these communities. Exposure prevention information and resources will be included.

### **Severity**

As in prior years, most individuals (90% of 2008 cases) who experienced a pesticide-related illness suffered mild symptoms. Even clinically mild symptoms may cause significant distress to individuals and their families and up to three days of lost work time. Nine percent of the exposures produced moderate outcomes. There were two cases with severe medical outcomes, and no deaths documented as DPP in 2008.

### **Prevention Activities**

Department of Health is currently working with WSDA, L&I, and University of Washington Pacific Northwest Agricultural Safety and Health center to integrate Department of Health findings from the analysis of contributing factors with findings from PNASH studies of agricultural workers, L&I follow-up on ChE depressions, and WSP inspections conducted by L&I and WSDA. Toward this end, Department of Health developed key prevention messages for several different important target groups.

## Key Prevention Messages by Target Group

<p><b>Male Hispanic Handlers (in Spanish)</b></p>	<ul style="list-style-type: none"> <li>• Important to wear all required PPE (especially goggles, gloves) <ul style="list-style-type: none"> <li>▪ Employers must provide you with what the label requires.</li> <li>▪ Wear for all handling tasks including cleaning spray equipment.</li> <li>▪ Always wear splash protection when adjusting or fixing pressurized equipment.</li> </ul> </li> <li>• Check the fit of your goggles and respirator every time.</li> <li>• Spray drift from air blast sprayers can travel far especially when trees are bare. Make sure thinners and other workers are a safe distance.</li> <li>• Communicate spray plans with foremen of other work crews and irrigators on the farm.</li> </ul>
<p><b>Male and female Hispanic field workers (in Spanish)</b></p>	<ul style="list-style-type: none"> <li>• If a sprayer comes into your work area, find your foremen and move.</li> <li>• Report drift to your foremen and decontaminate exposed skin and clothes.</li> </ul>
<p><b>Agricultural Employers/foremen</b></p>	<ul style="list-style-type: none"> <li>• Provide workers with all PPE required on pesticide label.</li> <li>• Supervise handlers to ensure they wear PPE and wear it correctly. Ensure proper respirator cartridge replacement.</li> <li>• Unlicensed handlers need close supervision.</li> <li>• Keep workers out of harm's way: facilitate communication between spray crews and others.</li> <li>• Notify neighbor farms when spraying blocks along the property line.</li> <li>• Post treated fields with required warning signs throughout the re-entry period.</li> <li>• Track REI's centrally at the office where work is assigned; ensure that crews and irrigators are not verbally directed to work in areas before REI has expired.</li> </ul>
<p><b>EPA</b></p>	<ul style="list-style-type: none"> <li>• Review REI's to ensure they are protective.</li> <li>• Give guidance for safe distance from orchard air blast sprayer.</li> <li>• Continue to encourage alternatives to acutely toxic pesticides.</li> <li>• Review worker exposure assumptions for handlers on air blast sprayers.</li> </ul>

Department of Health is incorporating prevention messages into regular outreach and training activities and plans to share the results with agency partners in pesticide safety at WSU, WSDA, L&I, NIOSH, and EPA. State health staff will also distribute study results and other pesticide-illness prevention information to agricultural employers, pesticide handlers, community groups, health care providers, and the public.

In 2008, the Department of Health presented findings from investigations and illness-monitoring activities at state, local and national venues. Department of Health continues to work closely with other agencies, notably L&I, WSDA, WSU, and PNASH. A common goal is to develop integrated prevention messages and strategies for agricultural employers and employees, and to provide quality training and safety information to pesticide handlers and farm supervisors.



# Labor and Industries

*Washington State Department of Labor and Industries' summary of pesticide-related activity for 2008.*

## Background

Within the Department of Labor and Industries, four divisions are involved in pesticide or agriculture related activities: the Division of Occupational Safety and Health (DOSH), Specialty Compliance Services, Industrial Insurance Services, and Field Services.

- DOSH has a mandate to ensure workplace safety and health. DOSH develops and adopts occupational safety and health standards, provides stakeholder training and outreach, co-sponsors the annual Governor's Industrial Safety and Health Conference and also an Agriculture Safety Day, inspects workplaces and enforces safety and health requirements, provides technical assistance and consultation services, handles employer appeals of safety and health citations, and generates the L&I section of the PIRT report. Specifically, DOSH enforces the pesticide Worker Protection and the Cholinesterase Monitoring standards, and manages the statewide Cholinesterase Monitoring program. The DOSH Consultation Education and Outreach Program L&I Consultation Services, a division of DOSH, provides no-cost safety, health and risk management consultations to employers. Although consultations are confidential and details are not discloseable under Chapter 49.17 RCW, summary information is provided.
- The Specialty Compliance Services Division issue farm labor contractor licenses, and enforces regulations on agricultural wages, breaks, rest periods, recordkeeping requirements, and prohibited jobs for teens.
- Insurance Services provides comprehensive workers' compensation programs. The Safety & Health Assessment & Research for Prevention (SHARP) group researches pesticide and agricultural related safety and health issues. The Claims Program administers wage replacement and medical benefits for workers who become ill or injured on the job.
- Field Services provides support for several of the other L&I services in the different L&I Regions throughout the state.

The pesticide-related activities of DOSH and Insurance Services are described below.

## **DOSH Cholinesterase Monitoring Program**

The Department of Labor and Industries adopted WAC 296-307-148, Cholinesterase 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. A depression in cholinesterase levels can lead to a wide 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.

Agricultural employers are required to offer each employee who may handle covered pesticides for thirty or more hours in any consecutive thirty day period the opportunity to participate in the cholinesterase blood monitoring program. Monitoring of cholinesterase levels in both red blood cells and blood serum can detect cholinesterase depression before the onset of illness. Employees are provided an annual baseline test prior to use of targeted pesticides. Cholinesterase activity levels are determined periodically during the application season and are compared to baseline levels. A decrease from baseline by 20 percent or more indicates potential pesticide over-exposure. Although by itself a cholinesterase level depression is not a violation of the standard, it is an indicator of exposure that L&I uses to initiate review and investigation of pesticide handling practices.

To encourage participation in cholinesterase monitoring, L&I held numerous outreach and training workshops on the standard for growers, employees and medical providers throughout the state.

## **Cholinesterase Monitoring Results**

During the 2008 cholinesterase monitoring season (January 21 – October 11), ~218 employers and 2,013 pesticide handlers participated in pre-exposure baseline cholinesterase testing. Three hundred and fourteen pesticide handlers were tested again (periodic testing) at least once during the application season. Most handlers submitting periodic tests met the testing requirement threshold for handling toxicity class I or II organophosphate or N-methyl carbamate pesticides for >30 hours in any consecutive 30 day period (mean is 46.5 hours). However, in some cases employers scheduled employees for testing regardless of the number of handling hours.



**Table 35. Comparison of Employer and Handler Cholinesterase (ChE) Testing and Cholinesterase Depressions in 2004 – 2008**

Years	2004	2005	2006	2007	2008
Employers participating in testing	380	316	244	226	218
Handlers submitting baseline tests	2630	2263	1889	1857*	2013
Handlers with at least one periodic test	580	611	471	386	314
Periodic tests	911	970	692	532	495
Handlers with ChE depression to work evaluation level	97 (16.7%)	49 (8.0%)	50 (10.6%)	49 (12.6%)	21 (6.7%)
Handlers with ChE depression to exposure removal level	22 (3.8%)	10 (1.6%)	7 (1.5%)	18 (4.6%)**	1 (0.1%)
Total # handlers with ChE depression	119 (20.5%)	59 (9.6%)	57 (12.1%)	67 (17.3%)	22 (7.0%)

\*One handler experienced simultaneous ChE depressions to both the evaluation and removal levels.

\*\*120 handlers submitted “working baselines” this is an increase from 48 in 2006.

Of the 314 handlers who received periodic testing, 21 (7.0%) experienced a depression in cholinesterase activity (action level) greater than 20% which required the employer to evaluate pesticide handling practices. Only 1 (0.3%) was temporarily removed from exposure to covered pesticides because of red blood cell cholinesterase depression > 30%. Significantly, no pesticide handlers were identified through occupational monitoring, with pesticide related illness.

The number of pesticide handlers undergoing blood cholinesterase testing in 2008 increased by ~8.0% from 2007. Conversely, the number of participating employers continued its downward trend but appears to be leveling off. This is believed to reflect industry pesticide use patterns, employer experience in identifying pesticide handlers covered by the testing requirements of the rule, and employer actions resulting in limiting handler exposure (e.g., increased use of integrated pest management techniques).

The above ChE summary information is an excerpt from the DOSH report titled “Cholinesterase Monitoring of Pesticide Handlers in Agriculture: 2008 Final Report.” The full report can be located along with the cholinesterase monitoring data on the L&I/DOSH cholinesterase monitoring Web site listed below:

<http://www.lni.wa.gov/Safety/Topics/AtoZ/Cholinesterase/files/2008Report.pdf>

[http://www.lni.wa.gov/Safety/Topics/AtoZ/Cholinesterase/files/DOSH\\_ChE\\_Report07\\_Final\\_010407.pdf](http://www.lni.wa.gov/Safety/Topics/AtoZ/Cholinesterase/files/DOSH_ChE_Report07_Final_010407.pdf)

The following is the complete web site for the cholinesterase program:

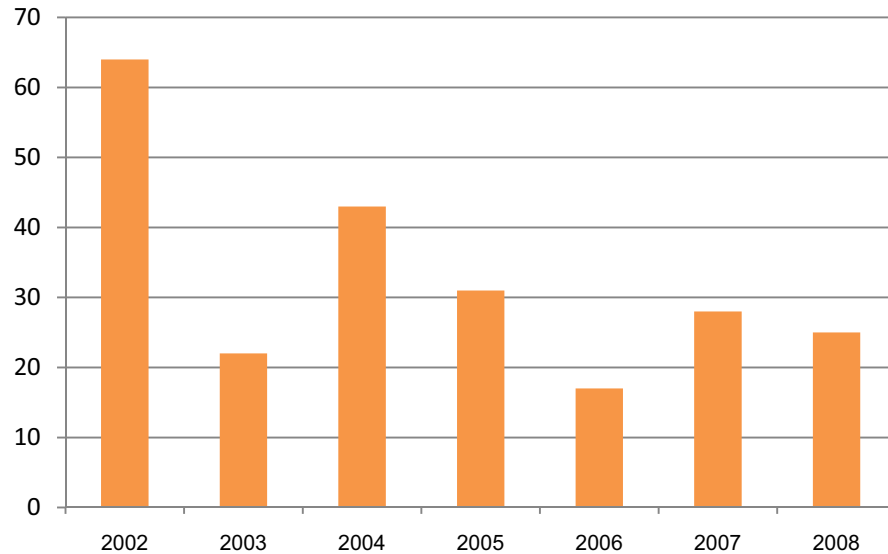
<http://www.lni.wa.gov/Safety/Topics/AtoZ/Cholinesterase/default.asp>.

## **DOSH Enforcement and Consultation**

To enforce safety and health requirements in the workplace, L&I DOSH staff members may issue citations requiring employers to implement changes in their workplace programs. Washington Industrial Safety and Health Act (WISHA) violations are typically categorized as either “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 . . .” and has an assigned penalty. A general violation is a situation where the “most serious injury, illness or disease that would likely 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.” All violations both serious and general require employers to implement changes in the workplace and provide DOSH confirmation of these corrections. Follow-up inspections may be performed as needed to ensure compliance. Infrequently, employers may be issued a citation for a violation classified as “willful” when there is evidence indicating either an intentional disregard of the WISH Act or plain indifference to its requirements. Inspections conducted by DOSH can result in citing several different violations which may be classified as either serious or general.

This section summarizes the results of pesticide-related safety and health inspections conducted by L&I DOSH. A description of each inspection is provided in Appendix C. The number of pesticide-related inspections slightly decreased in 2008.

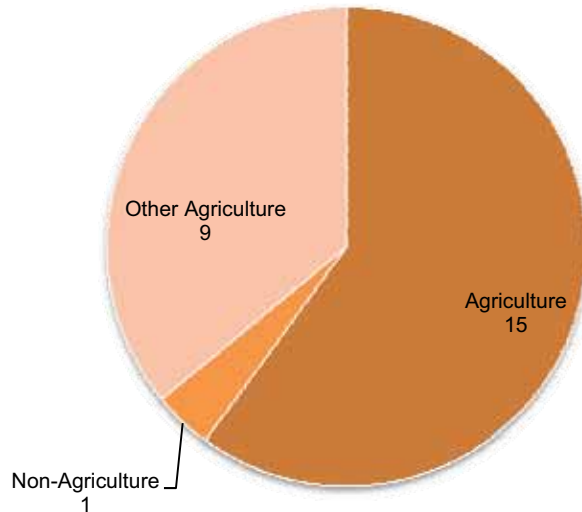
**Figure 13. DOSH Workplace Safety and Health Inspections, 2001 – 2008**



Of the 25 inspections conducted in Washington involving pesticide related issues, 23 (92%) were located in eastern Washington and two (6%) were located in western Washington. Of the 25 pesticide-related DOSH inspections, three were referrals from sources such as state agencies, health care providers, or the public. The remaining twenty-two inspections conducted were unannounced and initiated by DOSH.

Twenty-four of the 2008 inspections occurred in agricultural environments. One was in a non-agricultural setting. Figure 14 shows the inspections by type of work place. Fifteen (60%) of the inspections involved orchards. The “Other Agricultural” workplace classification included three wine grape farms, one crop planting service, one cherry orchard combined with a fruit packing establishments, one fresh fruits and vegetable farm, one dairy, one berry, and one fruit cold storage business. The one non-agricultural inspection involved a livestock establishment.

**Figure 14. DOSH Inspections by Type of Workplace, 2008**



#### **DOSH Inspections Involving Violations**

In 2008, L&I/DOSH conducted twenty five inspections involving citations related to pesticides use. Monetary penalties totaling \$22,770 were assessed for three “repeat serious violation” and 14 serious pesticide-related violations from eight of the 25 total inspections. There were 75 general pesticide-related violations which had no assessed penalties; these were cited on 22 of the 25 inspections.

The “repeat serious violation” penalty totaled \$11,700. The fourteen serious violations resulted in a total monetary penalty of \$11,070 with an average penalty of \$791.

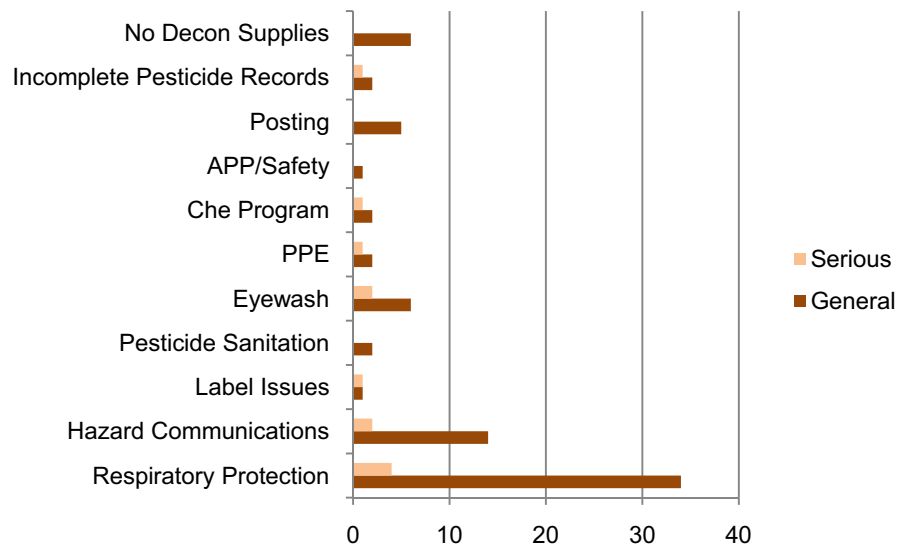
The most frequent type of serious (17) and general (75) WISHA violations cited in 2008 were the following:

- Respirator deficiencies, including no respirator program, improper storage or cleaning of respirators, no medical evaluations of worker’s ability to wear a respirator, or no respirator fit-testing.
- Hazard communication deficiencies in safety programs, including: missing written programs, chemical inventories, or MSDS; no employee training; or insufficient chemical labeling.
- Accident prevention program deficiencies.
- Employees not trained about pesticides, their hazards, or field sanitation.
- No emergency eyewash provided.
- Deficiencies in appropriate personal protective equipment.
- No hand-washing facilities or toilet.

- No required safety committee or safety meetings.
- Not posting safety, emergency, or pesticide spray information as required.
- Incomplete pesticide inventory.
- No decontamination supplies
- Inadequacies in the Cholinesterase Monitoring program.
- Improper use of product as directed by the label

General and serious violations involving pesticides are categorized by type of violation in Figure 15.

**Figure 15. WISHA General and Serious Violations Involving Pesticides, 2008**



### **L&I Claims Insurance Services Division, Claims Administration Program**

The Insurances Services Division, Claims Administration Program, processes workers' compensation claims initiated by on-the-job injuries and illnesses. In 2008, the Claims Administration Program received 138 claims where the injury or illness initially appeared to be related to pesticide exposure (Table 36). The number of pesticide-related claims increased in 2008 by  $\approx 24$  percent from 2007.

L&I either accepts or rejects claims based on whether or not a work-related injury or illness is diagnosed. Compensation is determined in accordance with the following definitions:

- **Medical Only/Non-Compensable Claim:** A worker experiences symptoms that he/she believes occurred from exposure on-the-job and seeks medical evaluation. When a physician finds that the symptoms are related to the exposure and there is objective evidence of injury, the claim is allowed. The medical evaluation and any follow-up medical care/treatment costs are paid. In this type of claim, 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 re-evaluated, but, once final, the worker can no longer reopen a claim based on original symptoms. Illness claims may be either opened or re-opened 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 36. Status of L&I Claims Initially Related to Pesticides, 2001 - 2008**

	2001	2002	2003	2004	2005	2006	2007	2008
Medical Only Non-compensable	75	79	83	70	62	68	82	108
Time Loss/ Compensable	8	4	4	4	2	4	2	5
Rejected	45	26	45	26	29	36	20	24
Pending/Unknown	-	-	1	1	-	1	0	0
Kept on Salary	1	-	-	-	-	1	1	1
<b>Total</b>	<b>129</b>	<b>109</b>	<b>133</b>	<b>101</b>	<b>93</b>	<b>110</b>	<b>105</b>	<b>138</b>

Claims categorized as *Medical only* and *Time loss* are compensated as work-related injuries. Of the 138 claims in 2008, 113 (~82%) were compensated by L&I as being work related injuries. L&I paid either time-loss or medical benefits for a total of \$111,070 in 2008.

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**

The criteria applied by L&I and DOH are independent and distinctly different from each other as they are used for different purposes. Because of the differences in the criteria used and the purposes for which they are applied, the DOH criteria and subsequent determination regarding a specific L&I claim's relationship to pesticide exposure does not invalidate or affect the determination made by L&I. At DOH's request L&I provides claim information involving pesticides to DOH. For 2008 DOH investigated 138 L&I worker compensation claims. Of the 138 claims investigate by DOH L&I assessed 114 of 138 claims as work-related. Of the 114 claims that L&I assessed as valid work related injuries, DOH classified 108 (~78%) as definitely, probably, or possibly related to pesticides (DPP). Based on the DOH criteria, 12 cases of 138 cases were classified by DOH as having insufficient evidence to assess the link with pesticides, suspicious, or unlikely to be related to pesticide exposure. Of the 24 claims that L&I rejected, DOH classified 10 as likely to be associated with pesticide exposure (DPP).

**Table 37. Comparison of L&I Claims and DOH Classification Status, 2008**

L&I Claim Determination	DOH Classification						Total
	Definite	Probable	Possible	Insuf Inf	Suspicious	Unlikely	
Medical Only/ Non-compensable	19	24	53	7	--	5	108
Time Loss/ Compensable	0	3	2	--	--	--	5
Rejected	1	3	6	5	--	9	23
Pending/Unknown	--	--	--	--	--	--	0
Kept on Salary	--	1	--	--	--	--	2
<b>Total</b>	<b>20</b>	<b>31</b>	<b>61</b>	<b>12</b>	<b>--</b>	<b>14</b>	<b>138</b>

Table 37 illustrates the difference in evaluation criteria and perspective between the two agencies, and in this table one hundred and fourteen of the 138 claims L&I referred to DOH for evaluation were agricultural. The 24 DPP non-agricultural cases were for employees who worked in a variety of professions including landscaping, construction, pest control, maintenance, and others.

Occupational exposures are described in detail in the DOH Section under Occupational Cases of Pesticide-Related Illness.



# APPENDIX A

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## Pesticide Incident Reporting and Tracking (PIRT) Review Panel

Pesticides – Health Hazards RCW 70.104.070-090

2009 Panel Representatives

Pesticide Incident Definition

Primary Agency Responsibilities Related to Pesticide Exposure



## **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

## 2009 Panel Representatives

Department of Health (Chair) \_\_\_\_\_ Gregg Grunenfelder

Department of Agriculture \_\_\_\_\_ Ann Wick

Department of Ecology \_\_\_\_\_ Debby Sargeant

Department of Fish and Wildlife \_\_\_\_\_ Bridget Moran

Department of Labor and Industries \_\_\_\_\_ Pam Edwards

Department of Natural Resources \_\_\_\_\_ Karen Ripley

General Public \_\_\_\_\_ Liesl Zappler

University of Washington \_\_\_\_\_ Richard Fenske, PhD

Washington State University \_\_\_\_\_ Allan Felsot, PhD

## **Pesticide Incident Definition**

A pesticide incident includes:

- Documented or suspected human cases of pesticide poisoning reported by health care providers as stated in Title 246 WAC, Chapter 246-101 WAC.
- 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

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

Under Chapter 70.104 RCW, DOH is responsible to protect and enhance the public health and welfare related to the use of pesticides. 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 Health 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 PIRT Review Panel.
- 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**

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**

L&I DOSH 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, Title 222 WAC, Chapter 222-38 WAC, pertaining 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 WSDA to respond to complaints involving humans or animals immediately. All other complaint investigations must be initiated within 48 hours.

### **Washington State Department of Health**

RCW 70.104.030 directs Health 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, Health must respond within 24 hours. For all other cases, Health must respond within 48 hours after notification.

### **Washington State 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

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## 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			Mild, transient, and spontaneously resolving symptoms
	FATAL 1	HIGH 2	MODERATE 3	
<ul style="list-style-type: none"> <li>Gastrointestinal System</li> </ul>	<ul style="list-style-type: none"> <li>Massive hemorrhage/perforation of gut</li> </ul>	<ul style="list-style-type: none"> <li>Diarrhea (G14, <b>sign only</b>)</li> <li>Melena (G17)</li> <li>Vomiting (G16, <b>sign only</b>)</li> </ul>	<ul style="list-style-type: none"> <li>Abdominal pain, cramping (G11)</li> <li>Anorexia (G12)</li> <li>Constipation (G13)</li> <li>Diarrhea (G14, <b>symptom</b>)</li> <li>Nausea (G15)</li> <li>Vomiting (G16, <b>symptom</b>)</li> </ul>	<ul style="list-style-type: none"> <li>Abdominal pain, cramping (G11)</li> <li>Anorexia (G12)</li> <li>Constipation (G13)</li> <li>Diarrhea (G14, <b>symptom</b>)</li> <li>Nausea (G15)</li> <li>Vomiting (G16, <b>symptom</b>)</li> </ul>
Respiratory System	<ul style="list-style-type: none"> <li>Cyanosis (RESP 2) + Respiratory depression (RESP 7)</li> <li>Pulmonary edema (RESP6)</li> <li>Respiratory arrest</li> </ul>	<ul style="list-style-type: none"> <li>Abnormal pulmonary x-ray</li> <li>Pleuritic chest pain/pain on deep breathing (RESP8)</li> <li>Respiratory depression (RESP7)</li> <li>Wheezing (RESP9)</li> <li>Dyspnea, shortness of breath (RESP4, <b>sign only</b>)</li> </ul>	<ul style="list-style-type: none"> <li>Cough (RESP1)</li> <li>Upper respiratory pain, irritation (RESP3)</li> <li>Dyspnea, shortness of breath (RESP4, <b>symptom</b>)</li> </ul>	<ul style="list-style-type: none"> <li>Cough (RESP1)</li> <li>Upper respiratory pain, irritation (RESP3)</li> <li>Dyspnea, shortness of breath (RESP4, <b>symptom</b>)</li> </ul>
Nervous System	<ul style="list-style-type: none"> <li>Coma (NS3)</li> <li>Paralysis, generalized (NS10)</li> <li>Seizure (NS5, <b>sign only</b>)</li> </ul>	<ul style="list-style-type: none"> <li>Confusion (NS4)</li> <li>Hallucinations (NS99 Other)</li> <li>Miosis with blurred vision (NS14)</li> <li>Seizure (NS5, <b>symptom</b>)</li> <li>Ataxia (NS1, <b>sign only</b>)</li> <li>Slurred speech (NS12)</li> <li>Syncope (fainting) (NS17)</li> <li>Peripheral neuropathy (NS11, <b>sign only</b>)</li> </ul>	<ul style="list-style-type: none"> <li>Hyperactivity (NS2)</li> <li>Headache (NS7)</li> <li>Profuse sweating (NS13)</li> <li>Dizziness (NS15)</li> <li>Ataxia (NS1, <b>symptom</b>)</li> <li>Peripheral neuropathy (NS11, <b>symptom</b>)</li> </ul>	<ul style="list-style-type: none"> <li>Hyperactivity (NS2)</li> <li>Headache (NS7)</li> <li>Profuse sweating (NS13)</li> <li>Dizziness (NS15)</li> <li>Ataxia (NS1, <b>symptom</b>)</li> <li>Peripheral neuropathy (NS11, <b>symptom</b>)</li> </ul>
Cardiovascular System	<ul style="list-style-type: none"> <li>Bradycardia/ heart rate &lt;40 for adults, &lt; 60 infants and children, &lt;80 neonates (CV1)</li> <li>Tachycardia/ heart rate&gt;180 for adults, &gt;190 infants/children, &gt;200 in neonates (CV4)</li> <li>Cardiac arrest (CV2)</li> </ul>	<ul style="list-style-type: none"> <li>Bradycardia / heart rate 40-50 in adults, 60-80 in infants/children, 80-90 in neonates (CV1)</li> <li>Tachycardia / heart rate=140-180 in adults, 160-190 infants/children, 160-200 in neonates (CV4)</li> <li>Chest Pain (CV7) + Hyperventilation, Tachypnea (RESP5)</li> <li>Conduction disturbance (CV3)</li> <li>Hypertension (CV6)</li> <li>Hypotension (CV5)</li> <li>Acid Base disturbance (pH = 7.15-7.24 or 7.60-7.69)</li> <li>Elevated anion gap (MISC4)</li> </ul>	<ul style="list-style-type: none"> <li>Fever (MISC1)</li> </ul>	<ul style="list-style-type: none"> <li>Fever (MISC1)</li> </ul>
Metabolism	<ul style="list-style-type: none"> <li>Acid Base disturbance (pH&lt; 7.15 or &gt;7.7)</li> </ul>	<ul style="list-style-type: none"> <li>Acid Base disturbance (pH = 7.15-7.24 or 7.60-7.69)</li> <li>Elevated anion gap (MISC4)</li> </ul>	<ul style="list-style-type: none"> <li>Fever (MISC1)</li> </ul>	<ul style="list-style-type: none"> <li>Fever (MISC1)</li> </ul>

## Signs and Symptoms by Severity Category

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

ORGAN SYSTEM	SEVERITY CATEGORY AND CODE			
	FATAL 1	HIGH 2	MODERATE 3	LOW 4
			<b>Pronounced or Prolonged Signs or Symptoms</b>	<b>Mild, transient, and spontaneously resolving symptoms</b>
Renal System	<ul style="list-style-type: none"> <li>Anuria (GU2)</li> <li>Renal failure</li> </ul>		<ul style="list-style-type: none"> <li>Hematuria (GU3)</li> <li>Oliguria (GU2)</li> <li>Proteinuria (GU4)</li> </ul>	<ul style="list-style-type: none"> <li>Polyuria (GU1)</li> </ul>
Muscular system	<ul style="list-style-type: none"> <li>Muscle rigidity (NS9) + elevated urinary myoglobin + elevated creatinine</li> </ul>		<ul style="list-style-type: none"> <li>Fasciculations (NS6)</li> <li>Muscle rigidity (NS9)</li> <li>Muscle weakness (NS8, <b>sign only</b>)</li> </ul>	<ul style="list-style-type: none"> <li>Muscle weakness (NS8, <b>symptom</b>)</li> <li>Muscle pain (NS16)</li> </ul>
Local effects on skin	<ul style="list-style-type: none"> <li>Burns, second degree (involving &gt;50% of body surface area)</li> <li>Burns, third degree (involving &gt;2% of body surface area)</li> </ul>		<ul style="list-style-type: none"> <li>Bullae (DERM1)</li> <li>Burns, second degree (involving &lt;50% of body surface area)</li> <li>Burns, third degree (involving &lt;2% of body surface area)</li> </ul>	<ul style="list-style-type: none"> <li>Skin Edema/Swelling, Erythema, Rash, Irritation/Pain, Pruritis (DERM3 - 7)</li> <li>Hives/Urticaria</li> </ul>
Local effects on eye	<ul style="list-style-type: none"> <li>Corneal ulcer/perforation</li> </ul>		<ul style="list-style-type: none"> <li>Corneal abrasion (EYE3)</li> <li>Ocular burn (EYE2)</li> </ul>	<ul style="list-style-type: none"> <li>Lacrimation (EYE4)</li> <li>Mydriasis (EYE6)</li> <li>Miosis (EYE1)</li> <li>Ocular pain/irritation/inflammation (diagnosis of conjunctivitis) (EYE5)</li> </ul>
Other effects				<ul style="list-style-type: none"> <li>Fatigue (MISC5)</li> <li>Malaise (MISC6)</li> </ul>

# Appendix C

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## Agency Data Summaries

Department of Agriculture

Department of Ecology, Agency Data Summary - Spill Program

Department of Health, Pesticide Incidents Annual Summary Report of DPP  
Exposures

Department of Labor and Industries, Summary of Pesticide Inspections, 2008



# WSDA 2008 Case Data

<u>Case#</u> 01-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	Commercial	<u>Date</u> 1/4/2008	<u>Farmworker?</u>	No	<u># People</u>	NA	<u>Severity 1</u>	Application_Inf	Commercial
<u>County</u>	Pierce	<u>Nature of Case</u>	Records			<u>Response time</u>	Same Day				<u>Children Involved?</u>	NonAg	NA
<u>Chemicals Involved:</u>		NA				<u>Other Agencies</u>					<u>Final Action</u>	Target/Complaint Area	
		NA					None				NOC	Records	

Failed to provide application records on request by WSDA.

<u>Case#</u> 02-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Commercial	<u>Date</u> 6/20/2006	<u>Farmworker?</u>	No	<u># People</u>	NA	<u>Severity 2</u>	Application_Inf	Commercial
<u>County</u>	Stevens	<u>Nature of Case</u>	License			<u>Response time</u>	Same Day				<u>Children Involved?</u>	NonAg	Ground
<u>Chemicals Involved:</u>		Herbicide				<u>Other Agencies</u>					<u>Final Action</u>	Target/Complaint Area	
		Tordon					None				NOC	License	

Update on an earlier investigation regarding off-label application./Application legal but applicator did not have the proper category license for site.

<u>Case#</u> 03-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	Unlicensed	<u>Date</u> 11/9/2007	<u>Farmworker?</u>	No	<u># People</u>	NA	<u>Severity 1</u>	Application_Inf	Agriculture
<u>County</u>	Walla Walla	<u>Nature of Case</u>	Container Disposal			<u>Response time</u>	Three Days				<u>Children Involved?</u>	Ag	NA
<u>Chemicals Involved:</u>		NA				<u>Other Agencies</u>					<u>Final Action</u>	Target/Complaint Area	
		NA					DOE, Police				NOC	Burning Pesticide Containers	

Burning empty pesticide containers./Verified. DOE also issued a Notice of Violation (Clean Air Act).

<u>Case#</u> 04-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Commercial	<u>Date</u> 1/16/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	Application_Inf	Commercial
<u>County</u>	King	<u>Nature of Case</u>	Drift to Property			<u>Response time</u>	Same Day				<u>Children Involved?</u>	NonAg	Ground
<u>Chemicals Involved:</u>		Insecticide				<u>Other Agencies</u>					<u>Final Action</u>	Target/Complaint Area	
		Carbaryl					None				NOC	Ornamentals/Property	

Ornamental application may have drifted on complaint's garage and contents./Application two weeks prior so no samples taken. Garage closed but tree overhanging garage. Did not verify drift but records incomplete.

<u>Case#</u> 05-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u> 1/23/2008	<u>Farmworker?</u>	No	<u># People</u>	Three	<u>Severity 3</u>	Application_Inf	School
<u>County</u>	Clark	<u>Nature of Case</u>	Human Exposure-direct			<u>Response time</u>	Same Day				<u>Children Involved?</u>	NonAg	Ground
<u>Chemicals Involved:</u>		Insecticide				<u>Other Agencies</u>					<u>Final Action</u>	Target/Complaint Area	
		Permethrin					DOH				NOI	Lice/Persons	

School superintendent directed two teachers to apply lice control product to clothing of students. Three students allegedly ill./Label does not allow such applications. No notification, no posting. No students sought medical care although one parent said two children ill and another parent said child had asthma attack.

# WSDA 2008 Case Data

<u>Case#</u> 06-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	SPI	<u>Date</u>	9/26/2006	<u>Farmworker?</u>	No	<u># People</u>	NA	<u>Severity 2</u>		<u>Application Inf</u>	WDO
<u>County</u>	Thurston	<u>Nature of Case</u>	Faulty WDO			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	<u>Severity 2</u>	No	<u>Application Inf</u>	NA
<u>Chemicals Involved:</u>														<u>Target/Complaint Area</u>	
														Faulty WDO Inspection	

Faulty WDO inspection/Verified. Failed to report conducive conditions.

<u>Case#</u> 07-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Commercial	<u>Date</u>	2/1/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>		<u>Application Inf</u>	Commercial
<u>County</u>	King	<u>Nature of Case</u>	Misuse			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	<u>Severity 2</u>	No	<u>Application Inf</u>	Ground
<u>Chemicals Involved:</u>														<u>Target/Complaint Area</u>	
		Herbicide												Landscape	
		Trifluralin						None							

Complainant said Commercial company misapplying pesticides. Over applied, improper PPE./Applied at a rate greater than label allowed, no posting, no MSDS and possible entry to water.

<u>Case#</u> 08-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	PO	<u>Date</u>	2/19/2008	<u>Farmworker?</u>	No	<u># People</u>	One	<u>Severity 2</u>		<u>Application Inf</u>	School
<u>County</u>	Pierce	<u>Nature of Case</u>	Human Exposure-odor			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	<u>Severity 2</u>	No	<u>Application Inf</u>	Ground
<u>Chemicals Involved:</u>														<u>Target/Complaint Area</u>	
		Herbicide												Landscape/Person	
		Casseron						DOH							

Person at Community College said application at school made her ill./Odor of casseron noticeable. No violations noted. School said they would not apply in future when students present. Referred to DOH.

<u>Case#</u> 09-08	2008	<u>Pesticide Involved</u>	Unkno	<u>License</u>	Unlicensed	<u>Date</u>	2/25/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>		<u>Application Inf</u>	Commercial
<u>County</u>	Benton	<u>Nature of Case</u>	License			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	<u>Severity 2</u>	No	<u>Application Inf</u>	NA
<u>Chemicals Involved:</u>														<u>Target/Complaint Area</u>	
		NA												Not Licensed	
		NA						None							

Anonymous caller said person making commercial applications without a license./Verified. Needed category exam.

<u>Case#</u> 10-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unknown	<u>Date</u>	2/29/2008	<u>Farmworker?</u>	No	<u># People</u>	Three	<u>Severity 0</u>		<u>Application Inf</u>	Agriculture
<u>County</u>	Benton	<u>Nature of Case</u>	Human Exposure-drift			<u>Response time</u>	One Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	<u>Severity 0</u>	Yes	<u>Application Inf</u>	NA
<u>Chemicals Involved:</u>														<u>Target/Complaint Area</u>	
		NA												Orchard/Persons	
		NA						Heath District							

Family has respiratory symptoms since moving next to orchard in Sept 2007. Think it might be from pesticides./WSDA role in investigations explained. Family seeking information only. Orchard owner has notified them of applications. Will call if have a complaint.

# WSDA 2008 Case Data

Case# 11-08	2008	Pesticide Involved	Yes	License	Commercial	Date	2/21/2008	Farmworker?	No	# People	Many	Severity 1	Application Inf	School
County	King	Nature of Case	Notification			Response time	Same Day				Children Involved?	Yes	NonAg	Ground
Chemicals Involved:	Herbicide Trifluralin	Herbicide Isoxaben	Herbicide Isoxaben			Other Agencies	None				Final Action		Target/Complaint Area	School Grounds/Notification

Applicator failed to provide notification of application./Verified. Records incomplete, did not follow WPS for students in greenhouse. No damaged or aggrieved persons.

Case# 12-08	2008	Pesticide Involved	Yes	License	PO	Date	2/24/2008	Farmworker?	No	# People	Unkno	Severity 1	Application Inf	School
County	Pierce	Nature of Case	Notification			Response time	Same Day				Children Involved?	Yes	NonAg	Ground
Chemicals Involved:	Herbicide 2,4-D	Herbicide Glyphosate	Herbicide Glyphosate			Other Agencies	None				Final Action		Target/Complaint Area	School Grounds/Notification

Application made to high school athletic field without notification./Application was not made to field, other posting was followed. However, records incomplete, annual notification not made to parents and improper notification procedures.

Case# 13-08	2008	Pesticide Involved	NA	License	NA	Date	2/28/2008	Farmworker?	No	# People	NA	Severity 1	Application Inf	Forestry
County	Stevens	Nature of Case	Misuse			Response time	Same Day				Children Involved?	No	Ag	NA
Chemicals Involved:	NA NA					Other Agencies	None				Final Action		Target/Complaint Area	Forestry/Misuse

Caller alleged DNR contract required illegal application./Reviewed contract. No violations noted.

Case# 14-08	2008	Pesticide Involved	No	License	Unlicensed	Date	Spring 2008	Farmworker?	No	# People	None	Severity 1	Application Inf	WDO
County	Asotin	Nature of Case	License			Response time	Same Day				Children Involved?	No	NonAg	NA
Chemicals Involved:	NA NA					Other Agencies	None				Final Action		Target/Complaint Area	SPI Work by Unlicensed Person

Alleged SPI work by unlicensed person./Verified.

Case# 15-08	2008	Pesticide Involved	Yes	License	Commercial	Date	3/12/2008	Farmworker?	No	# People	Many	Severity 1	Application Inf	Commercial
County	Spokane	Nature of Case	Human Exposure-drift			Response time	Same Day				Children Involved?	Yes	NonAg	Ground
Chemicals Involved:	Insecticide Mineral Oil		Copper			Other Agencies	DOH				Final Action		Target/Complaint Area	Landscape/Children

Children at daycare drifted on from landscape application. No illness or symptoms reported./Complaint two days after event. Rain had occurred so no sample possible. Probable evidence that drift occurred although unknown if children were contacted. Hands and faces washed, no health symptoms. Contacted Poison Control and advised product not a health issue. NOC for careless application.

# WSDA 2008 Case Data

Case#	Year	Pesticide Involved	Yes	License	Commercial	Date	Farmworker?	No	# People	None	Severity 2	Application Inf	Agriculture	
County		Nature of Case	Posting			Response time	Same Day	Other Agencies	Children Involved?	Final Action	Target/Complaint Area	Ground		
16-08	2008	Fumigant						None	NOI					
County Adams		1,3-dichloropropene												
Chemicals Involved:														
Improper posting of fumigated field./Verified. Repeat offender.														
17-08	2008		No	License	Unlicensed	Date	2/3/2008	Farmworker?	No	# People	None	Severity 2	Application Inf	WDO
County Mason						Response time	Same Day	Other Agencies	Children Involved?	Final Action	Target/Complaint Area	Ground		
Chemicals Involved:		NA						None	NOC					
		NA												
Performing WDO inspections without a license./Verified.														
18-08	2008		Yes	License	Commercial	Date	3/18/2008	Farmworker?	No	# People	One	Severity 3	Application Inf	Agriculture
County Chelan						Response time	Same Day	Other Agencies	Children Involved?	Final Action	Target/Complaint Area	Ground		
Chemicals Involved:		Insecticide						DOH	NOI					
		Kaolin												
Health problems after driving vehicle on road in area where orchard was being sprayed. Drift on vehicle./Drift verified. Person sought medical attention at hospital ER. Released after three hours.														
19-08	2008		Yes	License	Unlicensed	Date	3/17/2008	Farmworker?	No	# People	None	Severity 1	Application Inf	Commercial
County Thurston						Response time	Two Days	Other Agencies	Children Involved?	Final Action	Target/Complaint Area	Ground		
Chemicals Involved:		Herbicide						None	NOC					
		Unknown												
Unlicensed person applying herbicide commercially./Verified. Business has license but not the operator. Not directly supervised.														
20-08	2008		No	License	Commercial	Date	3/20/2008	Farmworker?	No	# People	None	Severity 0	Application Inf	Agriculture
County Grant						Response time	Same Day	Other Agencies	Children Involved?	Final Action	Target/Complaint Area	NA		
Chemicals Involved:		NA						None	NAI					
		NA												
Applying pesticides in high winds./Application was dry fertilizer only. No regulations on applications in wind.														
21-08	2008		No	License	Unlicensed	Date	3/12/2008	Farmworker?	No	# People	None	Severity 1	Application Inf	WDO
County Grays Harbor						Response time	Same Day	Other Agencies	Children Involved?	Final Action	Target/Complaint Area	NA		
Chemicals Involved:		NA						None	NOC					
		NA												
Performing WDO inspections without a license./Verified.														



# WSDA 2008 Case Data

Case#	22-08	2008	Pesticide Involved	NA	License	NA	Date	3/15/2008	Farmworker?	No	# People	None	Severity	0	Application Inf	NA
County	Skagit		Nature of Case	Bird Death			Response time	Same Day			Children Involved?	No		Ag	Application Inf	NA
Chemicals Involved:	NA						Other Agencies	None			Final Action	NAI		Target/Complaint Area	Bald Eagle Died	

Bald Eagle died at raptor center. Found ill two days earlier and pesticides suspected./Complete analysis run on liver and intestines. No pesticides found. High level of lead found.

Case#	23-08	2008	Pesticide Involved	NA	License	SPI	Date	3/25/2008	Farmworker?	No	# People	None	Severity	1	Application Inf	WDO
County	Snohomish		Nature of Case	Records			Response time	Same Day			Children Involved?	No		NonAg	Application Inf	NA
Chemicals Involved:	NA						Other Agencies	None			Final Action	NOC		Target/Complaint Area	Failure to Provide WDO Records	

Failure to provide WDO inspection records on request./Verified.

Case#	24-08	2008	Pesticide Involved	Yes	License	Unlicensed	Date	3/31/2008	Farmworker?	No	# People	Two	Severity	0	Application Inf	Residential
County	King		Nature of Case	Human Exposure-drift			Response time	Same Day			Children Involved?	No		NonAg	Application Inf	Ground
Chemicals Involved:	Insecticides			Herbicide			Other Agencies	DOH			Final Action	NAI		Target/Complaint Area	Landscape/Property	

Neighbors spray daily and making her and her husband ill./No evidence of violation or pesticide caused illness.

Case#	25-08	2008	Pesticide Involved	No	License	Unlicensed	Date	3/22/2008	Farmworker?	No	# People	None	Severity	0	Application Inf	Commercial
County	Yakima		Nature of Case	Drift - Runoff			Response time	9 Days			Children Involved?	No		NonAg	Application Inf	NA
Chemicals Involved:	NA						Other Agencies	None			Final Action	NAI		Target/Complaint Area	Runoff From Ag Building Site	

Chemicals leaching from orchard building site next door./No mix/load done at this site. May have been lime from shipment in fall.

Case#	26-08	2008	Pesticide Involved	Yes	License	Commercial-direct	Date	4/4/2008	Farmworker?	No	# People	One	Severity	2	Application Inf	Agriculture
County	Chelan		Nature of Case	Human Exposure-direct			Response time	Same Day			Children Involved?	No		Ag	Application Inf	Ground
Chemicals Involved:	Insecticide			Insecticide			Other Agencies	DOH			Final Action	NOI		Target/Complaint Area	Orchard/Person	

Sprayed in face when opened door to residence which is in corner of orchard./Apparent contact with pesticides. No health symptoms claimed. DOH did not investigate-insufficient information.

Case#	27-08	2008	Pesticide Involved	No	License	SPI	Date	5/30/2006	Farmworker?	No	# People	None	Severity	2	Application Inf	WDO
County	Snohomish		Nature of Case	Faulty WDO Inspection			Response time	Same Day			Children Involved?	No		NonAg	Application Inf	NA
Chemicals Involved:	NA						Other Agencies	None			Final Action	NOC		Target/Complaint Area	Faulty WDO Inspection	

Faulty WDO inspection./Verified. Failed to report conducive conditions.

# WSDA 2008 Case Data

<u>Case#</u> 28-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	SPI	<u>Date</u>	4/7/2008	<u>Farmworker? No</u>	<u># People</u>	None	<u>Severity 1 Children Involved?</u>	No	<u>Application Inf</u>	NonAg	<u>WDO</u>	NA
<u>County</u>	Okanogan	<u>Nature of Case</u>	License			<u>Response time</u>	One Day	<u>Other Agencies</u>			<u>Final Action</u>		<u>Target/Complaint Area</u>			
<u>Chemicals Involved:</u>		NA						None		NOC			WDO Inspections	W/O License		

Advertising as WDO inspector without a license./Verified. Not aware he needed WA SPI license. Information provided.

<u>Case#</u> 29-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u>	4/8/2008	<u>Farmworker? No</u>	<u># People</u>	None	<u>Severity 1 Children Involved?</u>	No	<u>Application Inf</u>	NonAg	<u>Commercial</u>	Ground
<u>County</u>	Thurston	<u>Nature of Case</u>	License			<u>Response time</u>	Same Day	<u>Other Agencies</u>			<u>Final Action</u>		<u>Target/Complaint Area</u>			
<u>Chemicals Involved:</u>		Herbicide Glyphosate						None		NOC			Commercial Applications	W/O License		

Making Commercial applications without a license. No posting./Verified.

<u>Case#</u> 30-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	NA	<u>Date</u>	3/1/2008	<u>Farmworker? No</u>	<u># People</u>	One	<u>Severity 1 Children Involved?</u>	No	<u>Application Inf</u>	NonAg	<u>Commercial</u>	NA
<u>County</u>	King	<u>Nature of Case</u>	Incorrect Application			<u>Response time</u>	One Day	<u>Other Agencies</u>			<u>Final Action</u>		<u>Target/Complaint Area</u>			
<u>Chemicals Involved:</u>		NA NA						None		NAI			Ineffective Mold Treatment			

Company made an ineffective surface treatment to mold on joists in crawl space./Mold stains on joists. WSDA does not license companies treating household mold. Outside scope of WSDA authority. Contact Better Business Bureau.

<u>Case#</u> 31-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	Unlicensed	<u>Date</u>	2008	<u>Farmworker? No</u>	<u># People</u>	None	<u>Severity 1 Children Involved?</u>	No	<u>Application Inf</u>	NonAg	<u>Commercial</u>	NA
<u>County</u>	Columbia	<u>Nature of Case</u>	License			<u>Response time</u>	11 Days	<u>Other Agencies</u>			<u>Final Action</u>		<u>Target/Complaint Area</u>			
<u>Chemicals Involved:</u>		NA NA						None		Verbal			Unlicensed Commercial Applicator			

Anonymous call regarding unlicensed commercial applicator./License paid for but not insurance. However, did not apply during this time although business active.

<u>Case#</u> 32-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Commercial	<u>Date</u>	4/20/2007	<u>Farmworker? No</u>	<u># People</u>	None	<u>Severity 1 Children Involved?</u>	No	<u>Application Inf</u>	Ag	<u>Forestry</u>	Ground
<u>County</u>	Stevens	<u>Nature of Case</u>	Misuse			<u>Response time</u>	Same Day	<u>Other Agencies</u>			<u>Final Action</u>		<u>Target/Complaint Area</u>			
<u>Chemicals Involved:</u>		Herbicide Hexazinone						None		NOC			Forestry/Over Rate Use			

Over rate use of herbicide by contractor with DNR./No evidence of over rate use. Records incomplete.

<u>Case#</u> 33-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Commercial	<u>Date</u>	4/22/2008	<u>Farmworker? No</u>	<u># People</u>	Many	<u>Severity 1 Children Involved?</u>	No	<u>Application Inf</u>	Ag	<u>Parks</u>	Air
<u>County</u>	Franklin	<u>Nature of Case</u>	Human Exposure-drift			<u>Response time</u>	Same Day	<u>Other Agencies</u>			<u>Final Action</u>		<u>Target/Complaint Area</u>			
<u>Chemicals Involved:</u>		Herbicide Aminopyralid						None		NAI			CRP/Trail Workers			

Aerial application drifted on several workers on "Rail to Trails" state land./No one came forward with clothing or complaint of drift. One person said he was not drifted on.

# WSDA 2008 Case Data

<u>Case#</u> 34-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u>	4/5/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	NonAg	<u>Application Inf</u>	Residential
<u>County</u>	Columbia	<u>Nature of Case</u>	Direct to property			<u>Response time</u>	One Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	<u>Severity 1</u>	NonAg	<u>Target/Complaint Area</u>	Ground
<u>Chemicals Involved:</u>		Herbicide				<u>Co Health</u>				<u>Final Action</u>	NOC			Lawn	
		Glyphosate													

Neighbor sprayed a one foot strip of lawn belonging to complainant./Verified. Property line dispute.

<u>Case#</u> 35-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unknown	<u>Date</u>	4/25/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	Ag	<u>Application Inf</u>	Agriculture
<u>County</u>	Yakima	<u>Nature of Case</u>	Drift to Crops			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	<u>Severity 1</u>	Ag	<u>Target/Complaint Area</u>	Unknown
<u>Chemicals Involved:</u>		Herbicide				<u>Other Agencies</u>				<u>Final Action</u>	NOC			Unknown/Apples, Pears	
		Oxyfluorfen													

Damage to apple and pear orchards./Verified by residue but no source found. NOC to applicators for insufficient records.

<u>Case#</u> 36-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	NA	<u>Date</u>	4/7/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 0</u>	NonAg	<u>Application Inf</u>	NA
<u>County</u>	Franklin	<u>Nature of Case</u>	Drift to Ornamentals			<u>Response time</u>	3 Days	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	<u>Severity 0</u>	NonAg	<u>Target/Complaint Area</u>	NA
<u>Chemicals Involved:</u>		NA				<u>Other Agencies</u>				<u>Final Action</u>	NAI			Ornamentals	
		NA													

Neighbors complained of damage to ornamentals from application at church property./Although pesticide residue found at one site, damage due to frost.

<u>Case#</u> 37-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	PA	<u>Date</u>	4/28/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>	Ag	<u>Application Inf</u>	Agriculture
<u>County</u>	Yakima	<u>Nature of Case</u>	Drift to Property			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	<u>Severity 2</u>	Ag	<u>Target/Complaint Area</u>	Ground
<u>Chemicals Involved:</u>		Fungicide				<u>Other Agencies</u>				<u>Final Action</u>	NOC			Orchard/Property	
		Trifloxystrobin													

Airblast application made in windy conditions drifted to complainants rental house and property./Verified by residue. Records on non-approved format.

<u>Case#</u> 38-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u>	3/25/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 3</u>	Ag	<u>Application Inf</u>	Agriculture
<u>County</u>	Walla Walla	<u>Nature of Case</u>	Drift to Crops			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	<u>Severity 3</u>	Ag	<u>Target/Complaint Area</u>	Ground
<u>Chemicals Involved:</u>		Herbicide				<u>Other Agencies</u>				<u>Final Action</u>	NOC			Weeds/Onions	
		Glyphosate													

Herbicide applied to control weeds drifted to onion field./Verified. \$700 damage.

<u>Case#</u> 39-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	PA	<u>Date</u>	4/29/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	Ag	<u>Application Inf</u>	Agriculture
<u>County</u>	Adams	<u>Nature of Case</u>	Drift to Crop			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	<u>Severity 1</u>	Ag	<u>Target/Complaint Area</u>	Ground
<u>Chemicals Involved:</u>		Herbicide				<u>Other Agencies</u>				<u>Final Action</u>	NAI			Wheat/Wheat	
		2,4-D													

Neighbor farmer spraying in high winds, drifted to property./No evidence of drift, same product used on both fields.

# WSDA 2008 Case Data

Case# 40-08	2008	Pesticide Involved	Yes	License PA	Date 4/29/2008	Farmworker?	No	# People	Three	Severity 2	Children Involved?	Yes	Application Inf	Ag	Agriculture
County Franklin		Nature of Case	Human Exposure-drift		Response time	Same Day	Other Agencies		Final Action	NOI			Target/Complaint Area	Orchard/Persons	Ground
Chemicals Involved:		Fungicide					None								
		Sulfur													

Drift to property from orchard spray. He, wife and son could smell and taste chemical. Concerned son would walk through chemical. /Probable contact, no health symptoms. Use contrary to label.

Case# 41-08	2008	Pesticide Involved	Yes	License PA	Date 5/2/2008	Farmworker?	No	# People	None	Severity 2	Children Involved?	No	Application Inf	Ag	Agriculture
County Douglas		Nature of Case	Drift to Property		Response time	Same Day	Other Agencies		Final Action	NOI			Target/Complaint Area	Cherries/Property	Ground
Chemicals Involved:		Insecticide			Insecticide		None								
		Pyraclostrobin			Sulfur										

Airblast application to cherries drifted to her residence./Residue found on property and house. No health problems noted.

Case# 42-08	2008	Pesticide Involved	Yes	License PA	Date 5/4/2008	Farmworker?	No	# People	None	Severity 1	Children Involved?	No	Application Inf	Ag	Agriculture
County Okanogan		Nature of Case	Drift to Organic Orchard		Response time	Same Day	Other Agencies		Final Action	NAI			Target/Complaint Area	Apples/Organic Pears	Ground
Chemicals Involved:		Fungicide					None								
		Sulfur													

Observed drift from apple orchard to organic pear orchard./Product sprayed was sulfur. Both the complainant and the alleged infractor had sprayed. Could not determine source of residue found on pears.

Case# 43-08	2008	Pesticide Involved	Yes	License Commercial	Date 5/7/2008	Farmworker?	No	# People	One	Severity 3	Children Involved?	No	Application Inf	NonAg	Commercial
County Okanogan		Nature of Case	Human Exposure-drift		Response time	Same Day	Other Agencies		Final Action	NOI			Target/Complaint Area	Parking Lot/Ornamentals, Person	Ground
Chemicals Involved:		Herbicide					DOH								
		Diuron													

Application next door to parking lot drifted on ornamentals and person./Verified. DOH "probable." Residue found.

Case# 44-08	2008	Pesticide Involved	Yes	License PO	Date 5/8/2008	Farmworker?	No	# People	One	Severity 2	Children Involved?	Yes	Application Inf	NonAg	School
County Franklin		Nature of Case	Human Exposure-Direct		Response time	Same Day	Other Agencies		Final Action	NOI			Target/Complaint Area	Sidewalk/Person	Ground
Chemicals Involved:		Herbicide					DOH								
		Glyphosate			Dicamba										

First grade student touched sidewalk where herbicide applied recently./Student's hands washed, no pesticide symptoms. NOI on use contrary to label, second offense.

# WSDA 2008 Case Data

Case# 45-08	2008	Pesticide Involved	No	License	Unlicensed	Date	5/2/2008	Farmworker?	No	# People	None	Severity 1	Application Inf	WDO
County	Lewis	Nature of Case	License			Response time	Same Day	Other Agencies		Children Involved?	Final Action	NonAg	Target/Complaint Area	NA
Chemicals Involved:			NA					None		NOC			Unlicensed WDO Inspections	

Performing complete WDO inspections without being licensed./Verified. Failure to submit records.

Case# 46-08	2008	Pesticide Involved	Yes	License	Commercial	Date	11/1/2007	Farmworker?	No	# People	None	Severity 1	Application Inf	Forestry
County	Cowlitz	Nature of Case	Ineffective Application			Response time	Same Day	Other Agencies		Children Involved?	Final Action	Ag	Target/Complaint Area	Ground
Chemicals Involved:		Herbicide						None		NOC			Scotch Broom	
		Triclopyr												

Complainant said the applicator he hired to treat scotch broom made ineffective applications./Complete control not possible with ground applications. NOC on insufficient records.

Case# 47-08	2008	Pesticide Involved	Yes	License	PA	Date	5/13/2008	Farmworker?	No	# People	One	Severity 2	Application Inf	Agriculture
County	Douglas	Nature of Case	Human Exposure-drift			Response time	Same Day	Other Agencies		Children Involved?	Final Action	Ag	Target/Complaint Area	Ground
Chemicals Involved:		Insecticide						DOH		NAI			Orchard/Person	
		Carbaryl												

Drift from orchard application on to property and also complainant./Verified by residue.

Case# 48-08	2008	Pesticide Involved	No	License	Unlicensed	Date	4/22/2008	Farmworker?	No	# People	None	Severity 3	Application Inf	WDO
County	Grays Harbor	Nature of Case	Faulty WDO Inspection			Response time	Same Day	Other Agencies		Children Involved?	Final Action	NonAg	Target/Complaint Area	NA
Chemicals Involved:		NA						None		NOI			Faulty WDO Inspection	
		NA												

Complainant said he was to receive a free inspection and was charged plus no insect control information./Inspector not licensed, failed to keep records, failed to have insurance.

Case# 49-08	2008	Pesticide Involved	Yes	License	Commercial	Date	4/27/2008	Farmworker?	No	# People	None	Severity 4	Application Inf	Agriculture
County	Grant	Nature of Case	Drift to Crops			Response time	Same Day	Other Agencies		Children Involved?	Final Action	Ag	Target/Complaint Area	Air
Chemicals Involved:		Herbicide						None		NOI			Wheat/Tree Fruit	
		Sulfonyl Ureas												

Herbicide drift from wheat application damaging his orchards./Verified. Significant economic loss to several orchard fruit yields.

Case# 50-08	2008	Pesticide Involved	Yes	License	Commercial	Date	5/3/2008	Farmworker?	No	# People	None	Severity 4	Application Inf	Agriculture
County	Grant	Nature of Case	Drift to Crop			Response time	Same Day	Other Agencies		Children Involved?	Final Action	Ag	Target/Complaint Area	Air
Chemicals Involved:		Herbicide						None		NOI			Wheat/Peas	
		MCPA												

Aerial application to wheat drifted and damaged adjacent pea field./Verified. Damage over \$10,000.

# WSDA 2008 Case Data

Case# 51-08	2008	Pesticide Involved	No License PA	Date 5/15/2008	Farmworker? No	# People	None	Severity 1	Application Inf	NA
County Yakima		Nature of Case	Improper Storage	Response time	One Day	Other Agencies	None	Children Involved? No	Ag	NA
Chemicals Involved:							None	Final Action	Target/Complaint Area	
								NAI	Storage	

Improperly stored pesticides found by county health inspector./Verified. Discussed recycling, area cleaned up by person after discussion.

Case# 52-08	2008	Pesticide Involved	Yes License PO	Date 4/16/2008	Farmworker? No	# People	None	Severity 1	Application Inf	ROW
County Skagit		Nature of Case	Misuse	Response time	Same Day	Other Agencies	DOE	Children Involved? No	NonAg	Ground
Chemicals Involved:							DOE	Final Action	Target/Complaint Area	
								NAI	ROW/Water, Frogs	

Anonymous complaint to DOE said herbicide being misapplied to dikes and roads on Fir Island./No evidence of misapplication. Records complete.

Case# 53-08	2008	Pesticide Involved	No License SPI	Date 2/14/2007	Farmworker? No	# People	None	Severity 2	Application Inf	WDO
County Spokane		Nature of Case	Faulty WDO Inspection	Response time	Same Day	Other Agencies	None	Children Involved? No	NonAg	NA
Chemicals Involved:							None	Final Action	Target/Complaint Area	
								NOC	Faulty WDO Inspection	

Faulty WDO inspection and missed WDOs./Verified.

Case# 54-08	2008	Pesticide Involved	Yes License Commercial	Date 5/19/2008	Farmworker? No	# People	One	Severity 1	Application Inf	Commercial
County King		Nature of Case	Human Exposure-drift	Response time	Same Day	Other Agencies	DOH	Children Involved? No	NonAg	Ground
Chemicals Involved:							DOH	Final Action	Target/Complaint Area	
								NAI	Trees/Person, Horse	

Person said she and her horse were drifted on by application made to trees at Racetrack./No evidence of drift on person, horse or area. No health symptoms.

Case# 55-08	2008	Pesticide Involved	Yes License PA	Date 5/14/2008	Farmworker? No	# People	One	Severity 1	Application Inf	Agriculture
County Yakima		Nature of Case	Human Exposure-drift	Response time	Same Day	Other Agencies	None	Children Involved? No	Ag	Ground
Chemicals Involved:							None	Final Action	Target/Complaint Area	
								NAI	Cherries/Person	

Neighbor did not feel good after cherry orchard next door sprayed./No evidence drift occurred. Established notification communication procedure between neighbors.

Case# 56-08	2008	Pesticide Involved	Yes License PA	Date 5/21/2008	Farmworker? No	# People	None	Severity 1	Application Inf	Agriculture
County Yakima		Nature of Case	Drift to Property	Response time	Same Day	Other Agencies	None	Children Involved? No	Ag	Ground
Chemicals Involved:							None	Final Action	Target/Complaint Area	
								NOC	Orchard/Property	

Complaint of drift from orchard application./Very low level of fungicide found. Variable wind conditions. NOC on records and drift.

# WSDA 2008 Case Data

Case#	Year	Pesticide Involved	Yes	License	Commercial Date	Farmworker?	No	# People	None	Severity 1	Application Inf	ROW
County	Whatcom	Nature of Case	Water Contamination	Response time	Same Day	Other Agencies	Final Action	Children Involved?	No	Target/Complaint Area	Ground	
57-08	2008	Herbicide Glyphosate	2,4-D	Sulfometuron M		Sheriff	NAI			NonAg	Railroad/Water	Ground
Lake Whatcom Railway applying pesticides to private property and in a manner that would enter lake. Also application directly to water./No evidence of any violations.												
58-08	2008	Herbicide Glyphosate	Misuse	Unlicensed	Date 3/15/2008	Farmworker?	No	# People	None	Severity 2	Application Inf	Residential
County	King	Nature of Case		Response time	Same Day	Other Agencies	Final Action	Children Involved?	No	NonAg	Target/Complaint Area	Ground
Chemicals Involved:						None	Warn Let				Hedge	
Complainant said neighbor damaged arborvitae hedge with herbicide./Neighbor denies using pesticide but was probable source of glyphosate injury.												
59-08	2008	Herbicide Glyphosate	Yes	License	PO	Date Spring 2008	Farmworker?	No	# People	None	Severity 2	School
County	Cowlitz	Nature of Case	Misuse	Response time	Same Day	Other Agencies	Final Action	Children Involved?	No	NonAg	Target/Complaint Area	Ground
Chemicals Involved:						None	NOC				School Grounds/Notification, Misuse	
Applications made without notification, unlicensed applicator using power equipment, no direct supervision./Verified, incomplete records and application contrary to label also found.												
60-08	2008	Herbicide Glyphosate	Yes	License	Commercial Date 5/14/2008	Farmworker?	No	# People	None	Severity 2	Application Inf	Agriculture
County	Skagit	Nature of Case	Water Contamination	Response time	Same Day	Other Agencies	Final Action	Children Involved?	No	Ag	Target/Complaint Area	Air
Chemicals Involved:						DOE	NOC				Potato Field/Water	
Application to blueberries drifted into river./Verified. Application was to potato field. Applicator drifted to levees and river.												
61-08	2008	Herbicides MSCL	Yes	License	Commercial Date 5/14/2008	Farmworker?	No	# People	None	Severity 4	Application Inf	Agriculture
County	Adams	Nature of Case	Drift to Crop	Response time	Same Day	Other Agencies	Final Action	Children Involved?	No	Ag	Target/Complaint Area	Unknown
Chemicals Involved:						None	NOC				Onions	
Onions damaged from an unknown application./Extensive damage to onions and several herbicides found. No source determined. NOCs on records.												
62-08	2008	Herbicide Triclopyr	Yes	License	Unlicensed	Date Spring 2008	Farmworker?	No	# People	None	Severity 3	Residential
County	Benton	Nature of Case	Misuse	Response time	Same Day	Other Agencies	Final Action	Children Involved?	No	NonAg	Target/Complaint Area	Ground
Chemicals Involved:						None	NAI				Stumps/Fees	
Trees dying after application of Brush Killer recommended by tree care company./Insufficient evidence to verify if company made recommendation on amount and timing. Adjacent tree symptoms probably due to runoff or volatilization. Cannot determine if tree will die.												

# WSDA 2008 Case Data

<u>Case#</u> 63-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	PA	<u>Date</u> 5/28/2008	<u>Farmworker?</u>	Yes	<u># People</u>	Five	<u>Severity 3</u>	Severely Involved?	No	<u>Application Inf</u>	Agriculture
<u>County</u>	Yakima	<u>Nature of Case</u>	Human Exposure-drift			<u>Response time</u>	Same Day		<u>Other Agencies</u>	Children	<u>Final Action</u>	Involved?	No	Ag	Ground
<u>Chemicals Involved:</u>	Insecticide Azinphos Methyl	<u>Insecticide</u>		Insecticide Quinoxifen					DOH	NOI				<u>Target/Complaint Area</u>	Cherries/Persons
Five farmworkers drifted on from adjacent cherry application./Verified, residue on clothing. Did not seek medical assistance.															
<u>Case#</u> 64-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u> 3/6/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>	Severely Involved?	No	<u>Application Inf</u>	Agriculture
<u>County</u>	Benton	<u>Nature of Case</u>	License			<u>Response time</u>	Same Day		<u>Other Agencies</u>	Children	<u>Final Action</u>	Involved?	No	Ag	Target/Complaint Area
<u>Chemicals Involved:</u>	Herbicide Unknown								EPA, USF&W	NAI				Weeds	
Two helicopters applying RUP during inversion. Not licensed in WA./Verified. Jurisdiction discussion. Referred to EPA and USF&W.															
<u>Case#</u> 65-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Commercial	<u>Date</u> 3/6/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>	Severely Involved?	No	<u>Application Inf</u>	Agriculture
<u>County</u>	Benton	<u>Nature of Case</u>	Misuse			<u>Response time</u>	Same Day		<u>Other Agencies</u>	Children	<u>Final Action</u>	Involved?	No	Ag	Target/Complaint Area
<u>Chemicals Involved:</u>	Herbicide Glyphosate								EPA, USF&W	NAI				Weeds	
Fixed wing aircraft applying RUP during inversion./Verified. Jurisdiction discussion. Referred to EPA and USF&W.															
<u>Case#</u> 66-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	PA	<u>Date</u> 3/20/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	Severely Involved?	No	<u>Application Inf</u>	Agriculture
<u>County</u>	Benton	<u>Nature of Case</u>	Drift to Vehicle			<u>Response time</u>	Same Day		<u>Other Agencies</u>	Children	<u>Final Action</u>	Involved?	No	Ag	Ground
<u>Chemicals Involved:</u>	Insecticide Chlorpyrifos								None	NAI				<u>Target/Complaint Area</u>	Cherries/Truck
Truck on road sprayed with airblast application to cherry orchard./Truck washed, no sample possible. Complaint withdrawn but orchard owner cooperative regarding flagging road.															
<u>Case#</u> 67-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u> 5/16/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>	Severely Involved?	No	<u>Application Inf</u>	Commercial
<u>County</u>	Skagit	<u>Nature of Case</u>	License			<u>Response time</u>	Same Day		<u>Other Agencies</u>	Children	<u>Final Action</u>	Involved?	No	NonAg	Ground
<u>Chemicals Involved:</u>	NA NA								None	NOI				<u>Target/Complaint Area</u>	License
Non-licensed applicator making pesticide applications commercially./Verified. Numerous other violations - PPE, records, posting, storage, MSDA sheets.															
<u>Case#</u> 68-08	2008	<u>Pesticide Involved</u>	Referred	<u>License</u>	Referred	<u>Date</u> Spring 2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity ?</u>	Severely Involved?	No	<u>Application Inf</u>	Agriculture
<u>County</u>	Benton	<u>Nature of Case</u>	Damage to Crop			<u>Response time</u>	Same Day		<u>Other Agencies</u>	Children	<u>Final Action</u>	Involved?	No	Ag	Referred
<u>Chemicals Involved:</u>	Referred Referred								USDA	Referred				<u>Target/Complaint Area</u>	Potatoes
Damaged potatoes./Referred to USDA Office of the Inspector General.															



# WSDA 2008 Case Data

Case# 69-08	2008	Pesticide Involved	Yes	License	Unlicensed	Date	5/20/2008	Farmworker?	No	# People	None	Severity 1	Application Inf	Residential
County	King	Nature of Case	Water Contamination			Response time	Same Day	Other Agencies		Children Involved?	Final Action	Severity 2	Application Inf	Ground
Chemicals Involved:		Herbicide						None			NAI	NonAg	Target/Complaint Area	Irrigation Canal Bank/Water
		MSCL										NonAg	Target/Complaint Area	

Application to bank of irrigation canal entering water./No evidence to support allegation.

Case# 70-08	2008	Pesticide Involved	No	License	NA	Date	5/1/2008	Farmworker?	No	# People	None	Severity 0	Application Inf	ROW
County	Pierce	Nature of Case	Misuse			Response time	Same Day	Other Agencies		Children Involved?	Final Action	Severity 2	Application Inf	NA
Chemicals Involved:		NA						None			NAI	NonAg	Target/Complaint Area	Weeds
		NA										NonAg	Target/Complaint Area	

Herbicide applications made along park trail without permission./Plant damage was from application made in 2006 (complaint filed). Residual leaching from under asphalt trail.

Case# 71-08	2008	Pesticide Involved	Yes	License	Unknown	Date	Spring 2008	Farmworker?	No	# People	None	Severity 2	Application Inf	Agriculture
County	Grant	Nature of Case	Drift to Crop			Response time	Same Day	Other Agencies		Children Involved?	Final Action	Severity 2	Application Inf	Unknown
Chemicals Involved:		Herbicide						WSU			NAI	Ag	Target/Complaint Area	Nursery/Unknown
		Sulfonylurea										Ag	Target/Complaint Area	

Herbicide drift unto nursery stock./Visual symptoms and a drift pattern showed nursery drifted on. Could not determine source.

Case# 72-08	2008	Pesticide Involved	Yes	License	Commercial	Date	5/31/2008	Farmworker?	No	# People	None	Severity 2	Application Inf	Agriculture
County	Lincoln	Nature of Case	Drift to Crop			Response time	Same Day	Other Agencies		Children Involved?	Final Action	Severity 2	Application Inf	Air
Chemicals Involved:		Herbicide						None			Warn Let	Ag	Target/Complaint Area	CRP/Wheat
		2,4-D										Ag	Target/Complaint Area	

Aerial application drifted to wheat during bloom and caused damage./Slight drift occurred, no damage to wheat quality or yield. Advisory letter regarding caution on off target movement.

Case# 73-08	2008	Pesticide Involved	Yes	License	PO	Date	5/31/2008	Farmworker?	No	# People	One	Severity 1	Application Inf	School
County	Yakima	Nature of Case	Human Exposure-drift			Response time	Two Days	Other Agencies		Children Involved?	Final Action	Severity 2	Application Inf	Ground
Chemicals Involved:		Herbicide						DOH			NOC	NonAg	Target/Complaint Area	Weeds/Person
		2,4-D										NonAg	Target/Complaint Area	

Herbicide applied to school grounds drifted on adjacent property and person. No illness reported./No evidence that drift occurred. May be odor problem. NOC on records, posting missing information.

Case# 74-08	2008	Pesticide Involved	Yes	License	PA	Date	5/28/2008	Farmworker?	No	# People	None	Severity 2	Application Inf	Agriculture
County	Spokane	Nature of Case	Drift to Ornamentals			Response time	Same Day	Other Agencies		Children Involved?	Final Action	Severity 2	Application Inf	Ground
Chemicals Involved:		Herbicide						None			Warn Let	Ag	Target/Complaint Area	Wheat/Ornamentals
		Mesosulfuron Methyl										Ag	Target/Complaint Area	

Herbicide application to wheat damaged ornamental plants in yard./Residue found, possible several sources. Source not reliably established.

# WSDA 2008 Case Data

<u>Case#</u> 75-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Commercial	<u>Date</u>	6/2/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	Application_Inf	Commercial
<u>County</u>	Spokane	<u>Nature of Case</u>	Notification			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	No	NonAg	Ground
<u>Chemicals Involved:</u>		Herbicide		Herbicide									Target/Complaint Area	
		2,4-D		Dicamba		MCPP		None			NOC		Notification	

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

<u>Case#</u> 76-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	Unknown	<u>Date</u>	6/2/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 0</u>	Application_Inf	NA
<u>County</u>	Yakima	<u>Nature of Case</u>	Drift to Property			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	No	Ag	NA
<u>Chemicals Involved:</u>		NA											Target/Complaint Area	
		NA						None			NAI		Property	

Airblast sprayer being pulled down county road caused pesticide odor to enter house. Concerned about health effects./No evidence of drift. No information to determine whose airblast sprayer was involved.

<u>Case#</u> 77-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u>	5/15/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	Application_Inf	Agriculture
<u>County</u>	Skagit	<u>Nature of Case</u>	Misuse			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	No	Ag	Ground
<u>Chemicals Involved:</u>		Herbicide		Herbicide									Target/Complaint Area	
		Glyphosate		2,4-D				None			Verbal W		Weeds/Water in Ditch	

Ditch along side a housing development sprayed with herbicide. Possible water contamination./Residue found in water in ditch but no way to determine property line or if water present when application made.

<u>Case#</u> 78-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Commercial	<u>Date</u>	4/22/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 3</u>	Application_Inf	Residential
<u>County</u>	Grant	<u>Nature of Case</u>	Drift to Ornamentals			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	No	NonAg	Ground
<u>Chemicals Involved:</u>		Herbicide											Target/Complaint Area	
		2,4-D						None			Warn Let		Weeds/Lilacs	

Application to weeds damaged lilacs from drift./Could not determine source of pesticides found. High residues of glyphosate, no source. Warning letter on application near wetland.

<u>Case#</u> 79-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u>	5/25/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 3</u>	Application_Inf	Residential
<u>County</u>	Snohomish	<u>Nature of Case</u>	Misuse			<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Children Involved?</u>	Final Action	No	NonAg	Ground
<u>Chemicals Involved:</u>		Herbicide		Herbicide									Target/Complaint Area	
		2,4-D		Triclopyr				None			NAI		Trees	

Neighbor sprayed her property, killing her plants./Residue and symptoms confirmed drift or direct spray. Case not continued at the request of the complainant.

# WSDA 2008 Case Data

<u>Case#</u> 80-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u>	6/2/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	Children Involved?	No	<u>Application Inf</u>	NonAg	<u>Residential</u>	Ground
<u>County</u>	Whatcom	<u>Nature of Case</u>	Drift to Property			<u>Response time</u>	6 Days	<u>Other Agencies</u>	None			<u>Final Action</u>	NAI		<u>Target/Complaint Area</u>	Blackberries		
<u>Chemicals Involved:</u>	Herbicide Triclopyr	<u>Herbicide</u>		Herbicide														

Neighbor sprayed or drifted on his blackberries./Ongoing property line dispute. No resolution until property line can be determined.

<u>Case#</u> 81-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	PO	<u>Date</u>	8/1/2007	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	Children Involved?	No	<u>Application Inf</u>	Ag	<u>Agriculture</u>	Ground
<u>County</u>	Pacific	<u>Nature of Case</u>	Misuse			<u>Response time</u>	12 Days	<u>Other Agencies</u>	DOE			<u>Final Action</u>	NAI		<u>Target/Complaint Area</u>	Spartina/Oysters		
<u>Chemicals Involved:</u>	Herbicide Imazapyr	<u>Herbicide</u>		Herbicide														

Applications to control spartina damaged oyster grounds./No evidence found to substantiate complaint.

<u>Case#</u> 82-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u>	5/30/2008	<u>Farmworker?</u>	No	<u># People</u>	One	<u>Severity 1</u>	Children Involved?	No	<u>Application Inf</u>	Ag	<u>Agriculture</u>	Ground
<u>County</u>	Douglas	<u>Nature of Case</u>	Human Exposure-drift			<u>Response time</u>	Same Day	<u>Other Agencies</u>	DOH			<u>Final Action</u>	NOC		<u>Target/Complaint Area</u>	Cherries/Person		
<u>Chemicals Involved:</u>	Fungicide Fenarimol	<u>Fungicide</u>		Fungicide														

Neighbor complained of drift to property and herself. No health problems stated. Did not want to file complaint on original complaint./Could not determine if drift occurred due to length of time and no samples. NOC on license and recordkeeping.

<u>Case#</u> 83-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	PA	<u>Date</u>	6/12/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>	Children Involved?	No	<u>Application Inf</u>	Ag	<u>Agriculture</u>	Ground
<u>County</u>	Yakima	<u>Nature of Case</u>	Drift to Property			<u>Response time</u>	Same Day	<u>Other Agencies</u>	None			<u>Final Action</u>	NOC		<u>Target/Complaint Area</u>	Orchard/Property		
<u>Chemicals Involved:</u>	Insecticide Azinphosmethyl	<u>Insecticide</u>		Insecticide														

Pesticide application made to neighboring orchard drifted on his property due to wind./Pesticide drifted due to wind and off-label application technique.

<u>Case#</u> 84-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	Unlicensed	<u>Date</u>	Spring 2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 4</u>	Children Involved?	No	<u>Application Inf</u>	NonAg	<u>Residential</u>	NA
<u>County</u>	Spokane	<u>Nature of Case</u>	Animal Poisoning			<u>Response time</u>	Same Day	<u>Other Agencies</u>	Animal Control			<u>Final Action</u>	NAI		<u>Target/Complaint Area</u>	Cats		
<u>Chemicals Involved:</u>	NA NA																	

Alleges that neighbor is poisoning cats./At least two cats died of probably ethylene glycol poisoning. Bowl taken by complainant had cat food, ethylene glycol, bromadiolone and malathion. Could not conclusively link food to cat deaths as bowl obtained by complainant.

# WSDA 2008 Case Data

Case# 85-08	2008	Pesticide Involved	Yes	License	Commercial	Date	2/21/2008	Farmworker?	No	# People	None	Severity	3	Application_Inf	Commercial
County	Benton	Nature of Case	Drift to Ornamentals			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application_Inf	Commercial
Chemicals Involved:		Herbicide	Herbicide			Herbicide		None				NOC		Target/Complaint Area	Ground
		Sulfometuron Methyl	Flumioxazin			Glyphosate								Weeds/Ornamentals	

Commercial application to property damaged neighboring ornamentals./Verified. Also license and recordkeeping problems.

Case# 86-08	2008	Pesticide Involved	Yes	License	Commercial	Date	6/17/2008	Farmworker?	No	# People	None	Severity	2	Application_Inf	Commercial
County	King	Nature of Case	Drift to Ornamentals			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application_Inf	Commercial
Chemicals Involved:		Insecticide						None				NOC		Target/Complaint Area	Ground
		Clothianidin												Apple Tree/Property	

Commercial application to homeowners apple tree drifting./Verified. Also wrong product used.

Case# 87-08	2008	Pesticide Involved	Yes	License	Commercial	Date	5/20/2008	Farmworker?	No	# People	None	Severity	4	Application_Inf	Commercial
County	Spokane	Nature of Case	Direct to Crop			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application_Inf	Commercial
Chemicals Involved:		Herbicide	Herbicide			Herbicide		None				NOI		Target/Complaint Area	Ground
		MCPA	Mesosulfuron Methyl			Glyphosate								Wheat/Cherries	

Commercial application to control weeds in wheat damaged wheat./Verified. Tank contaminated with glyphosate.

Case# 88-08	2008	Pesticide Involved	Yes	License	Commercial	Date	6/20/2008	Farmworker?	No	# People	None	Severity	1	Application_Inf	Agriculture
County	Walla Walla	Nature of Case	Drift to Vehicle			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application_Inf	Agriculture
Chemicals Involved:		Unknown						None				NAI		Target/Complaint Area	Air
		Unknown												Peas/Cars	

Two applications drifted to vehicles on road. Husband and wife driving different vehicles./Complaints withdrawn.

Case# 89-08	2008	Pesticide Involved	Yes	License	Commercial	Date	5/15/2008	Farmworker?	No	# People	None	Severity	3	Application_Inf	Agriculture
County	Grant	Nature of Case	Drift to Crop			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application_Inf	Agriculture
Chemicals Involved:		Herbicide	Herbicide			Herbicide		None				NOI		Target/Complaint Area	Air
		Thifensulfuron	2,4-D			Alkylphenol Ethoxate								Wheat/Sugar Beets	

Aerial applicator reported that he may have drifted on sugar beets during wheat application./Verified. No estimate of damage given.

Case# 90-08	2008	Pesticide Involved	Yes	License	Unlicensed	Date	6/18/2008	Farmworker?	No	# People	None	Severity	2	Application_Inf	Residential
County	Spokane	Nature of Case	Misuse			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application_Inf	Residential
Chemicals Involved:		Herbicide	Herbicide					None				NOC		Target/Complaint Area	Ground
		2,4-D	Picloram											Thistle	

Neighbor sprayed thistle, wants to be an organic farm eventually./Verified thistle treated. Used RUP without a license.

# WSDA 2008 Case Data

Case# 91-08	2008	Pesticide Involved	Yes	License	Commercial	Date	6/24/2008	Farmworker?	No	# People	Two	Severity	1	Application Inf	Commercial
County	Grant	Nature of Case	Misuse			Response time	Same Day	Other Agencies		Final Action	Children Involved?	No	NonAg	Target/Complaint Area	Air
Chemicals Involved:		Insecticide						DOH/USF&W		NAI			Target/Complaint Area	Mosquitoes/People	
Two persons said they were sprayed by an airplane while they were doing a bird survey./No evidence or residue found, area in normal mosquito control area, rates okay.															
Case# 92-08	2008	Pesticide Involved	Yes	License	Unknown	Date	Unknown	Farmworker?	No	# People	None	Severity	3	Application Inf	Residential
County	Benton	Nature of Case	Misuse			Response time	Same Day	Other Agencies		Final Action	Children Involved?	No	NonAg	Target/Complaint Area	Ground
Chemicals Involved:		Herbicide						Sherriff		NAI			Target/Complaint Area	Trees	
Local law enforcement requested WSDA to sample for case of suspected intentional damage to tree./ Sample positive for pesticide. Case referred to law enforcement.															
Case# 93-08	2008	Pesticide Involved	Yes	License	Commercial	Date	5/1/2008	Farmworker?	No	# People	None	Severity	4	Application Inf	Agriculture
County	Grant	Nature of Case	Drift to Crop			Response time	One Day	Other Agencies		Final Action	Children Involved?	No	Ag	Target/Complaint Area	Air
Chemicals Involved:		Herbicide						None		NOI			Target/Complaint Area	Wheat/Cherries	
Herbicide drift to cherries from application to wheat./Verified by symptoms and residue. No valid license to apply RUPs.															
Case# 94-08	2008	Pesticide Involved	No	License	Commercial	Date	Spring 2008	Farmworker?	No	# People	None	Severity	1	Application Inf	Commercial
County	Asotin	Nature of Case	Storage			Response time	Same Day	Other Agencies		Final Action	Children Involved?	No	Nor Ag	Target/Complaint Area	NA
Chemicals Involved:		MSCL						None		NAI			Target/Complaint Area	Storage	
Pesticides stored in a rental unit. Strong odor./No unusual odors, leakage or mess associated with storage unit. Well maintained and secure. Warning signs not required.															
Case# 95-08	2008	Pesticide Involved	Yes	License	Commercial	Date	7/2/2008	Farmworker?	No	# People	None	Severity	1	Application Inf	Agriculture
County	Grant	Nature of Case	Drift to Crop/bees			Response time	Same Day	Other Agencies		Final Action	Children Involved?	No	Ag	Target/Complaint Area	Air
Chemicals Involved:		Insecticide						None		Verbal W			Target/Complaint Area	Alfalfa/Bees	
Drift from aerial application to leaf cutter bees./Complainant dropped cases. Settled with applicator. Applicator had not renewed commercial license.															
Case# 96-08	2008	Pesticide Involved	Yes	License	Commercial	Date	7/3/2008	Farmworker?	No	# People	One	Severity	1	Application Inf	Commercial
County	Pend Oreille	Nature of Case	Human Exposure-direct			Response time	Same Day	Other Agencies		Final Action	Children Involved?	Yes	NonAg	Target/Complaint Area	Ground
Chemicals Involved:		Herbicide						DOH		Warn Let			Target/Complaint Area	Weeds/Person, Dogs	
Noxious weed spray contaminated water and dogs. Child had contact petting dogs./No exposure or symptoms determined. Application according to label. Warning letter on keeping animals away from spray area.															

# WSDA 2008 Case Data

<u>Case#</u> 97-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> Unlicensed	<u>Date</u> 7/1/2008	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 1</u> None	<u>Severity 2</u> None	<u>Application Inf</u> NonAg	<u>Residential</u> Ground
<u>County</u> Skagit		<u>Nature of Case</u> Human Exposure-odor		<u>Response time</u> Same Day	<u>Other Agencies</u> None	<u>Final Action</u> Verbal W	<u>Children Involved?</u> No	<u>Final Action</u> Verbal W	<u>Target/Complaint Area</u> Odor	
<u>Chemicals Involved:</u>		Herbicide MCPA								
Did not like the odor from a pesticide application./Blackberry and weed control. No drift, damage or exposure claimed. Verbal warning about volatilization and pesticide safety.										
<u>Case#</u> 98-08	2008	<u>Pesticide Involved</u> No	<u>License</u> Unknown	<u>Date</u> 6/1/2008	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 0</u> None	<u>Severity 1</u> None	<u>Application Inf</u> Residenti	<u>Residential</u> NA
<u>County</u> Stevens		<u>Nature of Case</u> Drift to Garden		<u>Response time</u> Same Day	<u>Other Agencies</u> None	<u>Final Action</u> NAI	<u>Children Involved?</u> No	<u>Final Action</u> NAI	<u>Target/Complaint Area</u> Garden	
<u>Chemicals Involved:</u>		NA NA								
Has herbicide symptoms in garden. Possibly from drift or own clippings and manure./Foliage and soil samples did not have any pesticide residue. No cause for symptoms found.										
<u>Case#</u> 99-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> Unknown	<u>Date</u> Spring 2008	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 2</u> None	<u>Severity 1</u> None	<u>Application Inf</u> NonAg	<u>Residential</u> Unknown
<u>County</u> Benton		<u>Nature of Case</u> Drift to Trees		<u>Response time</u> Same Day	<u>Other Agencies</u> None	<u>Final Action</u> NAI	<u>Children Involved?</u> No	<u>Final Action</u> NAI	<u>Target/Complaint Area</u> Trees	
<u>Chemicals Involved:</u>		Herbicide Atrazine								
Thought neighbor applying pesticides drifted and damaged her trees./No evidence of drift but atrazine found on foliage but no source located.										
<u>Case#</u> 100-08	2008	<u>Pesticide Involved</u> No	<u>License</u> Unlicensed	<u>Date</u> 6/30/2008	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 2</u> None	<u>Severity 1</u> None	<u>Application Inf</u> Ag	<u>Agricultural</u> NA
<u>County</u> Skagit		<u>Nature of Case</u> Open Containers		<u>Response time</u> 7 Days	<u>Other Agencies</u> DOE	<u>Final Action</u> NOC	<u>Children Involved?</u> No	<u>Final Action</u> NOC	<u>Target/Complaint Area</u> Open Pesticide Containers on Truck	
<u>Chemicals Involved:</u>		MSCL MSCL								
Referral from DOE said open pesticide containers on truck. Concern about water nearby./Containers not open when investigated but RUP not stored properly in locked container. Need to get licenses.										
<u>Case#</u> 101-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> Unlicensed	<u>Date</u> 6/27/2008	<u>Farmworker?</u> No	<u># People</u> One	<u>Severity 2</u> None	<u>Severity 1</u> None	<u>Application Inf</u> NonAg	<u>Residential</u> Ground
<u>County</u> Walla Walla		<u>Nature of Case</u> Human Exposure- drift		<u>Response time</u> Same Day	<u>Other Agencies</u> None	<u>Final Action</u> NOC	<u>Children Involved?</u> No	<u>Final Action</u> NOC	<u>Target/Complaint Area</u> Weeds/Person	
<u>Chemicals Involved:</u>		Herbicide Glyphosate								
Spray to ROW by unlicensed applicator drifted to property, contacted person./Drift occurred, no evidence of contact to person.										
<u>Case#</u> 102-08	2008	<u>Pesticide Involved</u> No	<u>License</u> Unlicensed	<u>Date</u> June, July	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 1</u> None	<u>Severity 2</u> None	<u>Application Inf</u> NonAg	<u>SPI</u> NA
<u>County</u> Okanogan		<u>Nature of Case</u> License		<u>Response time</u> 3 Days	<u>Other Agencies</u> None	<u>Final Action</u> NAI	<u>Children Involved?</u> No	<u>Final Action</u> NAI	<u>Target/Complaint Area</u> SPI	
<u>Chemicals Involved:</u>		NA NA								
Started a SPI business without a license./Not aware of rules. Obtained license.										

# WSDA 2008 Case Data

Case# 103-08	2008	Pesticide Involved	Yes	License	Unlicensed	Date	6/22/2008	Farmworker?	No	# People	None	Severity 1	NonAg	Application Inf	Commercial
County	Thurston	Nature of Case	Records	Response time	Same Day	Other Agencies	None	Final Action	NOI	Children Involved?	No	Application Inf	NonAg	Target/Complaint Area	Commercial
Chemicals Involved:		Herbicide													
		Glyphosate													

Routine none-agricultural use inspection resulted in a request for records. /Records not provided.

Case# 104-08	2008	Pesticide Involved	No	License	Unlicensed	Date	4/8/2008	Farmworker?	No	# People	Six	Severity 2	NonAg	Application Inf	Testing
County	Chelan	Nature of Case	Invalid Exam	Response time	Same Day	Other Agencies	None	Final Action	NOI	Children Involved?	No	Application Inf	NonAg	Target/Complaint Area	Commercial
Chemicals Involved:		NA													
		NA													

Possible exam compromise by six individuals./Verified.

Case# 105-08	2008	Pesticide Involved	Yes	License	Unlicensed	Date	7/10/2008	Farmworker?	No	# People	None	Severity 2	NonAg	Application Inf	Commercial
County	Chelan	Nature of Case	License	Response time	Same Day	Other Agencies	None	Final Action	NOC	Children Involved?	No	Application Inf	NonAg	Target/Complaint Area	Ground
Chemicals Involved:		NA													
		NA													

WSDA observed application being made and company unfamiliar to investigator./Unlicensed, failed to wear PPE, no posting, records not being kept.

Case# 106-08	2008	Pesticide Involved	Yes	License	PO	Date	July 2008	Farmworker?	No	# People	None	Severity 1	NonAg	Application Inf	ROW
County	Ferry	Nature of Case	Direct to Trees	Response time	Same Day	Other Agencies	None	Final Action	NAI	Children Involved?	No	Application Inf	NonAg	Target/Complaint Area	Ground
Chemicals Involved:		Herbicide													
		MSCL													

Drift from ROW damaged trees, possible water contact./No evidence of drift. Damage may be mower and equipment.

Case# 107-08	2008	Pesticide Involved	Yes	License	Unlicensed	Date	4/13/2008	Farmworker?	No	# People	None	Severity 3	NonAg	Application Inf	Residential
County	King	Nature of Case	Misuse	Response time	Same Day	Other Agencies	None	Final Action	NOC	Children Involved?	No	Application Inf	NonAg	Target/Complaint Area	Ground
Chemicals Involved:		Herbicide													
		Glyphosate													

Person drilled holes in trees and poured glyphosate into the holes./Person said he did it to reduce the number of leaves falling into retention pond. Did not intend to kill trees.

Case# 108-08	2008	Pesticide Involved	No	License	Unlicensed	Date	7/10/2008	Farmworker?	No	# People	None	Severity 1	NonAg	Application Inf	SPI
County	Kitsap	Nature of Case	License	Response time	5 Days	Other Agencies	None	Final Action	NOC	Children Involved?	No	Application Inf	NonAg	Target/Complaint Area	NA
Chemicals Involved:		NA													
		NA													

Pest inspector with an expired licensed making pest inspections./Verified. License now renewed.

# WSDA 2008 Case Data

<u>Case#</u> 107-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u> 4/13/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 3</u>	<u>Application Inf</u>	Residential
<u>County</u>	King	<u>Nature of Case</u>	Misuse			<u>Response time</u>	Same Day	<u>Other Agencies</u>		Children Involved?	No	NonAg	Ground
<u>Chemicals Involved:</u>		Herbicide						None		Final Action		Target/Complaint Area	Trees
		Glyphosate								NOC			

Person drilled holes in trees and poured glyphosate into the holes./Person said he did it to reduce the number of leaves falling into retention pond. Did not intend to kill trees.

<u>Case#</u> 108-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	Unlicensed	<u>Date</u> 7/10/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	<u>Application Inf</u>	SPI
<u>County</u>	Kitsap	<u>Nature of Case</u>	License			<u>Response time</u>	5 Days	<u>Other Agencies</u>		Children Involved?	No	NonAg	NA
<u>Chemicals Involved:</u>		NA						None		Final Action		Target/Complaint Area	License
		NA								NOC			

Pest inspector with an expired licensed making pest inspections./Verified. License now renewed.

<u>Case#</u> 109-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Commercial	<u>Date</u> 7/18/2008	<u>Farmworker?</u>	No	<u># People</u>	Five	<u>Severity 3</u>	<u>Application Inf</u>	Commercial
<u>County</u>	Grant	<u>Nature of Case</u>	Human Exposure-drift			<u>Response time</u>	Same Day	<u>Other Agencies</u>		Children Involved?	Yes	NonAg	Air
<u>Chemicals Involved:</u>		Insecticide						DOH, DOE		Final Action		Target/Complaint Area	Mosquitoes/People
		Malathion								NAI			

Helicopter spraying for mosquitoes drifted on people in campground. Temporary health symptoms./No violations noted. Applicator did notify campground but they did not notify campers.

<u>Case#</u> 110-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	SPI	<u>Date</u> 7/10/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>	<u>Application Inf</u>	SPI
<u>County</u>	Benton	<u>Nature of Case</u>	Faulty WDO Inspection			<u>Response time</u>	4 Days	<u>Other Agencies</u>		Children Involved?	No	NonAg	NA
<u>Chemicals Involved:</u>		NA						None		Final Action		Target/Complaint Area	Faulty inspections
		NA								NOC			

Two faulty home inspections./Verified. Also license problems.

<u>Case#</u> 111-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Commercial	<u>Date</u> 7/16/2008	<u>Farmworker?</u>	No	<u># People</u>	One	<u>Severity 1</u>	<u>Application Inf</u>	Commercial
<u>County</u>	Mason	<u>Nature of Case</u>	Misuse			<u>Response time</u>	Same Day	<u>Other Agencies</u>		Children Involved?	No	NonAg	Ground
<u>Chemicals Involved:</u>		Herbicide						DOE		Final Action		Target/Complaint Area	Aquatic weeds
		Diquat								NAI			

Alleged faulty application of herbicide to control aquatic weeds. Possible human exposure./No violations or exposure verified.

<u>Case#</u> 112-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	Unlicensed	<u>Date</u> 7/3/2006	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>	<u>Application Inf</u>	WDO
<u>County</u>	Snohomish	<u>Nature of Case</u>	License			<u>Response time</u>	Same Day	<u>Other Agencies</u>		Children Involved?	No	NonAg	NA
<u>Chemicals Involved:</u>		NA						None		Final Action		Target/Complaint Area	License
		NA								NOC			

Doing WDO inspections without a licensed./Verified.



# WSDA 2008 Case Data

<u>Case#</u> 115-08 2008	<u>Pesticide Involved</u> No	<u>License</u> Commercial	<u>Date</u> 5/1/2007	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 1</u> Children Involved? No	<u>Application Inf</u> NonAg	<u>Commercial</u> Ground
<u>County</u> Spokane	<u>Nature of Case</u> Herbicide	<u>Product Guarantee</u>	<u>Response time</u> Same Day	<u>Other Agencies</u> EPA	<u>Final Action</u> NAI	<u>Final Action</u> NAI	<u>Target/Complaint Area</u> Guarantee	
<u>Chemicals Involved:</u>	Flumioxon							

Product did not contain percent active on label./Conflicting lab results. Close to guarantee. Referred to EPA.

<u>Case#</u> 116-08 2008	<u>Pesticide Involved</u> No	<u>License</u> NA	<u>Date</u> 9/24/2007	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 0</u> Children Involved? No	<u>Application Inf</u> NonAg	<u>Residential</u> NA
<u>County</u> Asotin	<u>Nature of Case</u> Drift to Property	<u>Drift to Property</u>	<u>Response time</u> Same Day	<u>Other Agencies</u> None	<u>Final Action</u> NAI	<u>Final Action</u> NAI	<u>Target/Complaint Area</u> Drift to Carpet	
<u>Chemicals Involved:</u>	NA							
	NA							

Concern that spots on outdoor carpet caused by fertilizer or pesticide drift./Large greasy stains do not appear to be pesticide related.

<u>Case#</u> 117-08 2008	<u>Pesticide Involved</u> Yes	<u>License</u> PA	<u>Date</u> 4/6/2008	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 3</u> Children Involved? No	<u>Application Inf</u> Ag	<u>Agricultural</u> Ground
<u>County</u> Grant	<u>Nature of Case</u> Drift to Organic Crop	<u>Drift to Organic Crop</u>	<u>Response time</u> Same Day	<u>Other Agencies</u> WSDA Organic	<u>Final Action</u> NOC	<u>Final Action</u> NOC	<u>Target/Complaint Area</u> Apples/Organic Apples	
<u>Chemicals Involved:</u>	Insecticide		<u>Growth Reg</u>					
	Diazinon		Ethephon					

Applications to conventional apple orchard drifted to organic apple orchard./Verified. No estimate of economic damage provided.

<u>Case#</u> 118-08 2008	<u>Pesticide Involved</u> Yes	<u>License</u> PO/Unlic	<u>Date</u> 6/6/2008	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 2</u> Children Involved? No	<u>Application Inf</u> NonAg	<u>Residential</u> Ground
<u>County</u> Thurston	<u>Nature of Case</u> Drift to Property	<u>Drift to Property</u>	<u>Response time</u> Same Day	<u>Other Agencies</u> None	<u>Final Action</u> Warn Let	<u>Final Action</u> Warn Let	<u>Target/Complaint Area</u> Weeds/Ornamentals	
<u>Chemicals Involved:</u>	Herbicide							
	Glyphosate							

Damage to ornamentals. Think it is from neighbor./Residue and damage found but unable to determine which of two applications plus unknown source of triclopyr.

<u>Case#</u> 119-08 2008	<u>Pesticide Involved</u> Yes	<u>License</u> Commercial	<u>Date</u> 7/28/2008	<u>Farmworker?</u> No	<u># People</u> One	<u>Severity 1</u> Children Involved? No	<u>Application Inf</u> NonAg	<u>Commercial</u> Ground
<u>County</u> Spokane	<u>Nature of Case</u> Human Exposure Drift	<u>Human Exposure Drift</u>	<u>Response time</u> Same Day	<u>Other Agencies</u> DOH	<u>Final Action</u> Warn Let	<u>Final Action</u> Warn Let	<u>Target/Complaint Area</u> Weeds/Person	
<u>Chemicals Involved:</u>	Herbicide							
	2,4-D							

Not notified about pesticide application, could not breath because of drift./Notification not required. No evidence of drift, minor recordkeeping errors.

<u>Case#</u> 120-08 2008	<u>Pesticide Involved</u> No	<u>License</u> Commercial	<u>Date</u> 6/15/2008	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 1</u> Children Involved? No	<u>Application Inf</u> School	<u>School</u> NA
<u>County</u> Spokane	<u>Nature of Case</u> Storage	<u>Storage</u>	<u>Response time</u> Four Days	<u>Other Agencies</u> L&I	<u>Final Action</u> NAI	<u>Final Action</u> NAI	<u>Target/Complaint Area</u> Storage	
<u>Chemicals Involved:</u>	MSCL							
	MSCL							

L&I forwarded complaint about pesticides not stored properly at school, not secured, no labels./Site visited and pesticides stored properly. No violations.

# WSDA 2008 Case Data

Case# 121-08	2008	Pesticide Involved	Yes	License	Unlicensed	Date	9/25/2008	Farmworker?	No	# People	None	Severity	2	Application Inf	Commercial
County	Snohomish	Nature of Case	License			Response time	Two Dys	Other Agencies		Children Involved?	No	Final Action		Application Inf	NonAg
Chemicals Involved:	Rodenticide Bromadiolone							None		NOC				Target/Complaint Area	Rodents/License

House crawl space cleaning company applying rodenticides without a license. Verified.

Case# 122-08	2008	Pesticide Involved	NA	License	Unlicensed	Date	7/15/2008	Farmworker?	No	# People	None	Severity	1	Application Inf	SPI
County	Benton	Nature of Case	License			Response time	One Month	Other Agencies		Children Involved?	No	Final Action		Application Inf	NonAg
Chemicals Involved:	NA NA							None		NOC				Target/Complaint Area	SPI

Individual with expired licensed performing SPI inspections and applications. Verified.

Case# 123-08	2008	Pesticide Involved	Yes	License	PA	Date	8/1/2008	Farmworker?	No	# People	None	Severity	2	Application Inf	Agricultural
County	Yakima	Nature of Case	Drift to Property			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application Inf	Ag
Chemicals Involved:	Insecticide Bifenazate							None		NOC				Target/Complaint Area	Tree Nursery/Pasture

Nursery being sprayed drifted to her pasture while her and child present. No human exposure claimed./Residue found on pasture. Records deficient, not labeled for nursery use.

Case# 124-08	2008	Pesticide Involved	Yes	License	Unlicensed	Date	7/15/2008	Farmworker?	No	# People	None	Severity	3	Application Inf	Residential
County	King	Nature of Case	Misuse			Response time	4 Days	Other Agencies		Children Involved?	No	Final Action		Application Inf	NonAg
Chemicals Involved:	Herbicide Prometon							None		NOC				Target/Complaint Area	Weeds

Neighbor poured 4 gallons of herbicide on bare lot. Odor problem./Used over rate, respiratory problem due to odor. Possible storm drain contamination.

Case# 125-08	2008	Pesticide Involved	Yes	License	Commercial	Date	8/6/2008	Farmworker?	No	# People	None	Severity	1	Application Inf	Commercial
County	Skagit	Nature of Case	Drift to Garden			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application Inf	NonAg
Chemicals Involved:	Insecticide Imidicloprid							None		NOC				Target/Complaint Area	Trees/Garden

Application next door drifted on her organic garden./No evidence found to support complaint. NOC issued for recordkeeping.

Case# 126-08	2008	Pesticide Involved	Yes	License	Unknown	Date	7/1/2008	Farmworker?	No	# People	None	Severity	3	Application Inf	Agriculture
County	Walla Walla	Nature of Case	Drift to Trees			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application Inf	Ag
Chemicals Involved:	Herbicides Several							None		NAI				Target/Complaint Area	Wheat/Trees

Damage to trees from herbicide drift./Eight different applications and four applicators involved. Foliage positive for 2,4-D, glyphosate and MCPP. Definitive sources could not be determined.

# WSDA 2008 Case Data

<u>Case#</u> 127-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> Commercial	<u>Date</u> 8/6/2008	<u>Farmworker?</u> Yes	<u>Same Day</u>	<u>Yes</u>	<u># People</u> One	<u>Severity 4</u> No	<u>Application Inf</u> Ag	<u>Agriculture</u> Air
<u>County</u> Adams		<u>Nature of Case</u> Human Exposure-drift		<u>Response time</u>	<u>Other Agencies</u>			<u>Children Involved?</u> No	<u>Final Action</u>	<u>Target/Complaint Area</u> Mint/Person	
<u>Chemicals Involved:</u>		<u>Insecticide</u> Bifenazate		<u>Insecticide</u> Pyraclostrobin	<u>DOH</u>			<u>NOI</u>			

Company employee checking chemigation tanks oversprayed by aerial application. Verified. Became ill and transported to hospital emergency room. Given atropine injections and recovered.

<u>Case#</u> 128-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> Unlicensed	<u>Date</u> July 2008	<u>Farmworker?</u> No	<u>Same Day</u>	<u>No</u>	<u># People</u> None	<u>Severity 2</u> No	<u>Application Inf</u> ROW	<u>ROW</u> Ground
<u>County</u> King		<u>Nature of Case</u> License		<u>Response time</u>	<u>Other Agencies</u>			<u>Children Involved?</u> No	<u>Final Action</u>	<u>Target/Complaint Area</u> ROW	
<u>Chemicals Involved:</u>		<u>Herbicide</u> Unknown			<u>DOT</u>			<u>NOC</u>			

Applied herbicide to Right of Way without proper license and/or category. Verified and did not submit records.

<u>Case#</u> 129-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> Unknown	<u>Date</u> 5/23/2008	<u>Farmworker?</u> No	<u>Same Day</u>	<u>No</u>	<u># People</u> None	<u>Severity 1</u> No	<u>Application Inf</u> Ag	<u>Agriculture</u> Ground
<u>County</u> Skagit		<u>Nature of Case</u> Drift to Crop		<u>Response time</u>	<u>Other Agencies</u>			<u>Children Involved?</u> No	<u>Final Action</u>	<u>Target/Complaint Area</u> Potatoes/Conifer Nursery	
<u>Chemicals Involved:</u>		<u>Herbicide</u> Glufosinate			<u>None</u>			<u>NAI</u>			

Application to potatoes damaged plants in conifer nursery. Insufficient evidence to demonstrate drift. Damage may be due to other causes. Access denied to property.

<u>Case#</u> 130-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> Unknown	<u>Date</u> 8/4/2008	<u>Farmworker?</u> No	<u>Same Day</u>	<u>No</u>	<u># People</u> None	<u>Severity 1</u> No	<u>Application Inf</u> Ag	<u>Agriculture</u> Ground
<u>County</u> Walla Walla		<u>Nature of Case</u> Drift Across Road		<u>Response time</u>	<u>Other Agencies</u>			<u>Children Involved?</u> No	<u>Final Action</u>	<u>Target/Complaint Area</u> Apples/Highway	
<u>Chemicals Involved:</u>		<u>Unknown</u> Unknown			<u>None</u>			<u>Verbal</u>			

Complainant wanted WSDA to warn applicator that he was drifting across highway. Not an official complaint. WSDA visited with orchard manager regarding possible drift and they will talk with the applicator to be more careful.

<u>Case#</u> 131-08	2008	<u>Pesticide Involved</u> No	<u>License</u> NA	<u>Date</u> 8/10/2008	<u>Farmworker?</u> No	<u>Same Day</u>	<u>No</u>	<u># People</u> None	<u>Severity 0</u> No	<u>Application Inf</u> Ag	<u>Agriculture</u> NA
<u>County</u> Benton		<u>Nature of Case</u> Drift to Ornamentals		<u>Response time</u>	<u>Other Agencies</u>			<u>Children Involved?</u> No	<u>Final Action</u>	<u>Target/Complaint Area</u> Hops/Tree	
<u>Chemicals Involved:</u>		<u>NA</u> NA			<u>None</u>			<u>NAI</u>			

Applications to hops damaging neighboring tree. Damage probably due to drought.

<u>Case#</u> 132-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> PO	<u>Date</u> 8/13/2008	<u>Farmworker?</u> No	<u>Same Day</u>	<u>No</u>	<u># People</u> None	<u>Severity 1</u> No	<u>Application Inf</u> ROW	<u>ROW</u> Ground
<u>County</u> Okanogan		<u>Nature of Case</u> Drift to Water		<u>Response time</u>	<u>Other Agencies</u>			<u>Children Involved?</u> No	<u>Final Action</u>	<u>Target/Complaint Area</u> ROW/Water	
<u>Chemicals Involved:</u>		<u>Herbicide</u> 2,4-D			<u>DOE</u>			<u>NOC</u>			

ROW application to county road going in to water. No label violations. Label has aquatic application. NOC on records.

# WSDA 2008 Case Data

<u>Case#</u> 133-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u>	8/8/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>	<u>Application Inf</u>	Residential
<u>County</u>	Snohomish	<u>Nature of Case</u>	Animal Exposure	<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Final Action</u>	None	<u>Children Involved?</u>	No	<u>Application Inf</u>	NonAg	Ground
<u>Chemicals Involved:</u>	Herbicide Glyphosate					<u>None</u>		<u>NOC</u>				<u>Target/Complaint Area</u>	Weeds/Dog	

Application by mowing company causing dog to lose hair on nose./Could not verify cause of hair loss. NOC for application as a commercial applicator without a license.

<u>Case#</u> 134-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u>	8/19/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	<u>Application Inf</u>	PO
<u>County</u>	Walla Walla	<u>Nature of Case</u>	Drift to Property	<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Final Action</u>	None	<u>Children Involved?</u>	No	<u>Application Inf</u>	NonAg	Ground
<u>Chemicals Involved:</u>	Herbicide Glyphosate					<u>None</u>		<u>NOC</u>				<u>Target/Complaint Area</u>	Weeds/Property	

Application to alley drifted to property and hay bales./No residue found. NOC, not licensed as Public Operator, incomplete records.

<u>Case#</u> 135-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u>	8/20/2008	<u>Farmworker?</u>	No	<u># People</u>	Three	<u>Severity 4</u>	<u>Application Inf</u>	Residential
<u>County</u>	Pierce	<u>Nature of Case</u>	Human Exposure-drift	<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Final Action</u>	None	<u>Children Involved?</u>	No	<u>Application Inf</u>	NonAg	Ground
<u>Chemicals Involved:</u>	Herbicide 2,4-D	Herbicide MCPA				<u>DOH</u>		<u>NOI</u>				<u>Target/Complaint Area</u>	Weeds/People	

Application drifted on people and property. People reported feeling ill./Drift verified, human exposure definite on one, possible on one, unlikely on one.

<u>Case#</u> 136-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Commercial	<u>Date</u>	8/11/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 4</u>	<u>Application Inf</u>	Agriculture
<u>County</u>	Grant	<u>Nature of Case</u>	Direct to Crop	<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Final Action</u>	None	<u>Children Involved?</u>	No	<u>Application Inf</u>	Ag	Air
<u>Chemicals Involved:</u>	Fungicide Chlorothalonil					<u>None</u>		<u>NAI</u>				<u>Target/Complaint Area</u>	Mint	

Accidental discharge of 30 gallons by air to organic mint field./Verified. No action as release was accident. Field lost organic certification.

<u>Case#</u> 137-08	2008	<u>Pesticide Involved</u>	Unkno	<u>License</u>	Unknown	<u>Date</u>	7/1/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 0</u>	<u>Application Inf</u>	Commercial
<u>County</u>	King	<u>Nature of Case</u>	Direct to Ornamentals	<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Final Action</u>	None	<u>Children Involved?</u>	No	<u>Application Inf</u>	NonAg	Ground
<u>Chemicals Involved:</u>	Unknown Unknown					<u>None</u>		<u>NAI</u>				<u>Target/Complaint Area</u>	Weeds/Ornamentals	

Application made by commercial company killed ornamental plantings./Compliant withdrawn. Plants may have died due to irrigation issues/drought.

<u>Case#</u> 138-08	2008	<u>Pesticide Involved</u>	Yes	<u>License</u>	Unlicensed	<u>Date</u>	8/12/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>	<u>Application Inf</u>	Commercial
<u>County</u>	Franklin	<u>Nature of Case</u>	License	<u>Response time</u>	Same Day	<u>Other Agencies</u>		<u>Final Action</u>	None	<u>Children Involved?</u>	No	<u>Application Inf</u>	NonAg	Ground
<u>Chemicals Involved:</u>	Insecticide Cyfluthrin					<u>None</u>		<u>NOC</u>				<u>Target/Complaint Area</u>	Insects	

Applied to an apartment complex without a license./Verified.

# WSDA 2008 Case Data

Case# 139-08	2008	Pesticide Involved	Yes	License	Commercial	Date	Spring 2008	Farmworker?	No	# People	None	Severity	3	Application Inf	Commercial
County	Grant	Nature of Case	Direct to Property			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application Inf	Commercial
Chemicals Involved:		Herbicide						None		Children Involved?	No	NOC		Target/Complaint Area	Ground
		Prodiamine								Final Action				Lawn/Garden	

Application made to lawn caused damage./Verified. Applied over rate.

Case# 140-08	2008	Pesticide Involved	No	License	NA	Date	8/27/2008	Farmworker?	No	# People	One	Severity	0	Application Inf	Residential
County	Snohomish	Nature of Case	Human Exposure-drift			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application Inf	Residential
Chemicals Involved:		NA						None		Children Involved?	No	NAI		Target/Complaint Area	Person
		NA								Final Action					

Neighbor applies pesticides deliberately to make her ill. Drifted on her and her property./No evidence any pesticides applied.

Case# 141-08	2008	Pesticide Involved	No	License	NA	Date	Summer	Farmworker?	No	# People	None	Severity	0	Application Inf	Residential
County	King	Nature of Case	Misuse			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application Inf	Residential
Chemicals Involved:		NA						None		Children Involved?	No	NAI		Target/Complaint Area	Ornamentals
		NA								Final Action					

Neighbor applying pesticides damaging his ornamentals. Applying pesticides to his property without his consent./Damage due to poor culture conditions. No evidence of pesticide damage or drift.

Case# 142-08	2008	Pesticide Involved	No	License	NA	Date	2008	Farmworker?	No	# People	None	Severity	0	Application Inf	Agriculture
County	Walla Walla	Nature of Case	Misuse			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application Inf	Agriculture
Chemicals Involved:		NA						None		Children Involved?	No	NAI		Target/Complaint Area	Onions
		NA								Final Action					

Onions collected as part of 2008 WSDA review of pesticide use on onions./No target residues collected.

Case# 143-08	2008	Pesticide Involved	Yes	License	Commercial	Date	9/7/2008	Farmworker?	No	# People	One	Severity	3	Application Inf	Agriculture
County	Chelan	Nature of Case	Human Exposure-drift			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application Inf	Agriculture
Chemicals Involved:		Fungicide						DOH		Children Involved?	No	NOC		Target/Complaint Area	Pears/Person
		Zinc								Final Action					

Sprayed by helicopter applying to pears. He was in his driveway./Verified by residue. Complainant reported he felt ill.

Case# 144-08	2008	Pesticide Involved	Yes	License	Unknown	Date	8/28/2008	Farmworker?	No	# People	None	Severity	2	Application Inf	Residential
County	Snohomish	Nature of Case	Misuse			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action		Application Inf	Residential
Chemicals Involved:		Herbicide						None		Children Involved?	No	NAI		Target/Complaint Area	Ornamentals
		2,4-D								Final Action					

Third visit to property. Someone is applying pesticides to her property and damaging plants./Pesticide residue found. Can not find source. See also Case 160-2007 and 79-2008.

# WSDA 2008 Case Data

Case# 145-08	2008	Pesticide Involved	Yes	License	Commercial	Date	9/10/2008	Farmworker?	Yes	# People	30+	Severity 2	Children Involved?	No	Application Inf	Ag	Application Inf	Agriculture
County Grant		Nature of Case	Human Exposure-drift			Response time	Same Day	Other Agencies		Final Action	NAI	Final Action			Target/Complaint Area	Alfalfa/Persons	Target/Complaint Area	Air
Chemicals Involved:		Herbicide						DOH										
		Clethodim																

Thirty plus farmworkers in orchard alleged drifted on from aerial alfalfa application./No residue on clothing, no symptoms on nearby plants. Workers went to medical clinic, reported exposure symptoms. Vitals normal, conflicting statements.

Case# 146-08	2008	Pesticide Involved	No	License	Unlicensed	Date	8/15/2008	Farmworker?	No	# People	None	Severity 2	Children Involved?	No	Application Inf	NonAg	Application Inf	SPI
County Clark		Nature of Case	License			Response time	Same Day	Other Agencies		Final Action	NOI	Final Action			Target/Complaint Area		Target/Complaint Area	NA
Chemicals Involved:		NA						None										
		NA																

Unlicensed inspector performing specific SPI inspections./Verified. Faulty recommendations.

Case# 147-08	2008	Pesticide Involved	No	License	SPI	Date	6/13/2008	Farmworker?	No	# People	None	Severity 2	Children Involved?	No	Application Inf	SPI	Application Inf	SPI
County Kitsap		Nature of Case	Faulty SPI			Response time	Same Day	Other Agencies		Final Action	NOC	Final Action			Target/Complaint Area		Target/Complaint Area	NA
Chemicals Involved:		NA						None										
		NA																

Failure to prepare a diagram for a complete WDO inspection report./Verified.

Case# 148-08	2008	Pesticide Involved	Yes	License	Unlicensed	Date	9/8/08	Farmworker?	No	# People	None	Severity 4	Children Involved?	No	Application Inf	NonAg	Application Inf	Commercial
County Benton		Nature of Case	Animal Death			Response time	Nine Days	Other Agencies		Final Action	NOC	Final Action			Target/Complaint Area		Target/Complaint Area	Ground
Chemicals Involved:		Rodenticide						None										
		Bromadiolone																

Kitten in parking area of grain company appeared to be poisoned./Verified. Another dead cat found. Rodent bait left out with access by cats. Poisoned mice not disposed of properly.

Case# 149-08	2008	Pesticide Involved	Yes	License	Commercial	Date	9/12/2008	Farmworker?	No	# People	None	Severity 1	Children Involved?	No	Application Inf	NonAg	Application Inf	Commercial
County Yakima		Nature of Case	Drift to Garden			Response time	Same Day	Other Agencies		Final Action	NOC	Final Action			Target/Complaint Area		Target/Complaint Area	Ground
Chemicals Involved:		Herbicide						None										
		Quinclorac																

Concerned that application to lawn next door drifted or leached to her garden./No residue found in soil or plants. No drift symptoms. NOC on records.

Case# 150-08	2008	Pesticide Involved	Yes	License	Commercial	Date	9/18/2008	Farmworker?	No	# People	None	Severity 2	Children Involved?	No	Application Inf	Ag	Application Inf	Agriculture
County Douglas		Nature of Case	Direct to Organic			Response time	Same Day	Other Agencies		Final Action	NOC	Final Action			Target/Complaint Area		Target/Complaint Area	Air
Chemicals Involved:		Growth Regulator						WSDA Organic										
		NAA																

Application of Stop Drop (Naphthalene acetic acid) to organic apple orchard by mistake./Verified. Lost organic certification for three years. No cost estimate given.

# WSDA 2008 Case Data

Case# 151-08	2008	Pesticide Involved	Yes	License	Unlicensed	Date	9/1/2008	Farmworker?	No	# People	None	Severity 1	Application_Inf	Residential
County	Snohomish	Nature of Case	Misuse			Response time	Two Days	Other Agencies		Children Involved?	No	Final Action	NonAg	Ground
Chemicals Involved:		Herbicide						None					Target/Complaint Area	
		Glyphosate											ivy	

Complainant said neighbor is deliberately applying pesticides to her ivy to kill it./Glyphosate residue found on ivy and soil. No proof to link to neighbor.

Case# 152-08	2008	Pesticide Involved	No	License	SPI	Date	6/18/2008	Farmworker?	No	# People	None	Severity 2	Application_Inf	SPI
County	Spokane	Nature of Case	Faulty SPI			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action	Target/Complaint Area	NA
Chemicals Involved:		NA						None					Faulty SPI	
		NA												

Alleges that home inspector did an improper WDO and missed evidence of WDOs./Verified. Failed to note rot and conducive conditions. Incomplete report.

Case# 153-08	2008	Pesticide Involved	Yes	License	PO	Date	9/19/2008	Farmworker?	No	# People	None	Severity 1	Application_Inf	Commercial
County	King	Nature of Case	Human Exposure-direct			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action	NonAg	Ground
Chemicals Involved:		Fungicide						None					Target/Complaint Area	
		Propiconazole											Human exposure-direct	

Workers exposed to fungicide at Safeco Field./No evidence to suggest pesticide exposure.

Case# 154-08	2008	Pesticide Involved	Yes	License	Commercial	Date	3/1/2008	Farmworker?	No	# People	None	Severity 1	Application_Inf	Residential
County	Grant	Nature of Case	Drift to Ornamentals			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action	NonAg	Ground
Chemicals Involved:		Herbicide						None					Target/Complaint Area	
		Bromacil											Trees	

Application of herbicide killing trees./Not enough correlation between application sites and dying trees to prove cause.

Case# 155-08	2008	Pesticide Involved	Yes	License	Unlicensed	Date	9/1/2008	Farmworker?	No	# People	None	Severity 2	Application_Inf	Commercial
County	Snohomish	Nature of Case	Misuse			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action	NonAg	Ground
Chemicals Involved:		Herbicide						None					Target/Complaint Area	
		2,4-D											Property	

Herbicide applied to her property without permission. No notification or posting./Verified. Unlicensed application by landscaper at housing complex. No records kept.

Case# 156-08	2008	Pesticide Involved	No	License	NA	Date	2 Years Ago	Farmworker?	No	# People	None	Severity 0	Application_Inf	Residential
County	Clark	Nature of Case	Misuse			Response time	Same Day	Other Agencies		Children Involved?	No	Final Action	NonAg	NA
Chemicals Involved:		NA						None					Target/Complaint Area	
		NA											Trees	

Arborvitae died after planting on two occasions. Complainant thinks it was due to blackberry spray./No evidence to confirm cause of dead plants. Plants removed before investigation.

# WSDA 2008 Case Data

Case# 157-08	2008	Pesticide Involved	Yes	License PO	Date 9/29/2008	Farmworker?	No	# People	One	Severity 3	Application Inf	School Ground
County Pierce		Nature of Case	Human Exposure-drift		Response time	Same Day			Children Involved?	No	NonAg	
Chemicals Involved:			Herbicide Triclopyr		Other Agencies	DOH			Final Action	NOC	Target/Complaint Area	Weeds/Person

Person complained he felt ill from applications to school grounds outside his window./Application done according to label. Probably odor problem only. NOC on records and posting.

Case# 158-08	2008	Pesticide Involved	Yes	License PA	Date 9/27/2008	Farmworker?	No	# People	None	Severity 1	Application Inf	Agriculture Ground
County Grant		Nature of Case	Misuse		Response time	Same Day			Children Involved?	No	Ag	
Chemicals Involved:		Growth Regulator Methylcylopropene			Other Agencies	None			Final Action	NAI	Target/Complaint Area	Controlled Atmosphere storage

Company reported accidental over application of product to CA storage room due to misunderstanding of room size./Not a tolerance issue. Company has corrected. Need to look at licensing of apparatus.

Case# 159-08	2008	Pesticide Involved	Yes	License Commercial	Date 9/29/2008	Farmworker?	No	# People	None	Severity 1	Application Inf	Commercial Ground
County King		Nature of Case	Notification		Response time	Same Day			Children Involved?	No	NonAg	
Chemicals Involved:		Herbicide Glyphosate			Other Agencies	None			Final Action	NOC	Target/Complaint Area	Notification

Person on pesticide sensitive list not notified prior to landscape application./Verified. New employee not aware of requirement.

Case# 160-08	2008	Pesticide Involved	Unkno	License NA	Date 7/10/2008	Farmworker?	No	# People	None	Severity 0	Application Inf	Unknown
County Benton		Nature of Case	Dead Animals		Response time	Same Day			Children Involved?	No	NonAg	
Chemicals Involved:		Unknown Unknown			Other Agencies	DOE			Final Action	NAI	Target/Complaint Area	Dead Animals

Advisement from DOE. Dead cows and other animals. Pesticides used in area./DOE investigating case. Will contact WSDA if further assistance needed. (No further requests.)

Case# 161-08	2008	Pesticide Involved	Yes	License PA	Date 10/17/2008	Farmworker?	No	# People	19	Severity 5	Application Inf	Agriculture Ground
County Franklin		Nature of Case	Human Exposure-drift		Response time	Same Day			Children Involved?	Yes	Ag	
Chemicals Involved:		Fumigant Metam Sodium			Other Agencies	DOH, Local Police, Fire			Final Action	NOI	Target/Complaint Area	Corn Residue/Persons

Strong odor from fumigation application. Eye irritation, headaches, nausea reported./Twelve of 19 people sought medical attention. Application moved off target during inversion conditions.

Case# 162-08	2008	Pesticide Involved	Yes	License Commercial	Date 10/22/2008	Farmworker?	No	# People	One	Severity 2	Application Inf	Commercial Ground
County Snohomish		Nature of Case	Notification		Response time	Same Day			Children Involved?	No	NonAg	
Chemicals Involved:		Herbicide Glyphosate			Other Agencies	None			Final Action	NOI	Target/Complaint Area	Notification

On Pesticide Sensitive List, not notified./Verified. Repeat offence. Numerous other violations. (See 032-2009 also.)



# WSDA 2008 Case Data

<u>Case#</u> 163-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> Unlicensed	<u>Date</u> 9/1/2008	<u>Farmworker?</u> No	<u># People</u> One	<u>Severity 1</u> Children Involved? No	<u>Application Inf</u> NonAg	<u>Residential</u> Ground
<u>County</u> Spokane		<u>Nature of Case</u> Human Exposure-drift		<u>Response time</u> Same Day	<u>Other Agencies</u> DOH	<u>Final Action</u> NAI		<u>Target/Complaint Area</u> Spiders/Person	
<u>Chemicals Involved:</u>		Insecticide Bifenthrin							
Home and garden application for spiders causing breathing difficulties./No use violations found and application occurred some time before symptoms.									
<u>Case#</u> 164-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> Commercial	<u>Date</u> 9/12/2008	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 4</u> Children Involved? No	<u>Application Inf</u> NonAg	<u>Commercial</u> Ground
<u>County</u> Benton		<u>Nature of Case</u> Direct to Ornaments		<u>Response time</u> Same Day	<u>Other Agencies</u> None	<u>Final Action</u> NOI		<u>Target/Complaint Area</u> Grass	
<u>Chemicals Involved:</u>		Herbicides MSCL							
Lawn care company made an application to greenways and killed a large amount of grass./Verified. Spray tank contaminated with glyphosate. Problems with records.									
<u>Case#</u> 165-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> Commercial	<u>Date</u> 10/28/2008	<u>Farmworker?</u> No	<u># People</u> Four	<u>Severity 4</u> Children Involved? No	<u>Application Inf</u> Ag	<u>Agriculture</u> Ground
<u>County</u> Franklin		<u>Nature of Case</u> Human Exposure-drift		<u>Response time</u> Same Day	<u>Other Agencies</u> DOH	<u>Final Action</u> NOI		<u>Target/Complaint Area</u> Corn Residue/Persons	
<u>Chemicals Involved:</u>		Fumigant Metam Sodium							
Adults exposed to fumigant during chemigation./Verified. One person treated at hospital emergency room. Fumigant moved off target during inversion.									
<u>Case#</u> 166-08	2008	<u>Pesticide Involved</u> Yes	<u>License</u> Unlicensed	<u>Date</u> 6/15/2008	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 3</u> Children Involved? No	<u>Application Inf</u> NonAg	<u>Residential</u> Ground
<u>County</u> Skagit		<u>Nature of Case</u> Drift to Trees		<u>Response time</u> Same Day	<u>Other Agencies</u> None	<u>Final Action</u> NOC		<u>Target/Complaint Area</u> Blackberries/Trees	
<u>Chemicals Involved:</u>		Herbicide 2,4-D		<u>Triclopyr</u>					
Application by neighbor damaged and killed his trees from drift./Positive residue analysis verified drift occurred.									
<u>Case#</u> 167-08	2008	<u>Pesticide Involved</u> No	<u>License</u> NA	<u>Date</u> 10/1/2008	<u>Farmworker?</u> No	<u># People</u> None	<u>Severity 0</u> Children Involved? No	<u>Application Inf</u> NonAg	<u>Residential</u> NA
<u>County</u> Mason		<u>Nature of Case</u> Misuse		<u>Response time</u> Same Day	<u>Other Agencies</u> None	<u>Final Action</u> NAI		<u>Target/Complaint Area</u> Ornaments	
<u>Chemicals Involved:</u>		NA NA							
Neighbor sprayed his property and damaged his plants./No evidence of herbicide use found. Probably insect and cultural problems.									
<u>Case#</u> 168-08	2008	<u>Pesticide Involved</u> No	<u>License</u> Commercial	<u>Date</u> 11/21/2008	<u>Farmworker?</u> No	<u># People</u> Two	<u>Severity 2</u> Children Involved? No	<u>Application Inf</u> ROW	<u>ROW</u> Ground
<u>County</u> Yakima		<u>Nature of Case</u> Human Exposure-drift		<u>Response time</u> Same Day	<u>Other Agencies</u> None	<u>Final Action</u> NOI		<u>Target/Complaint Area</u> ROW/Persons	
<u>Chemicals Involved:</u>		Herbicide Flumioxazin		<u>Herbicide</u> Diuron					
ROW application to county road spraying over mailboxes, paper boxes and driveway. Concerned residues are making her and her husband sick./No evidence of illness caused by pesticides. Residue on mailbox.									

# WSDA 2008 Case Data

<u>Case#</u> 169-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	Commercial	<u>Date</u> 8/15/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	Application_Inf	Commercial
<u>County</u>	Out of State	<u>Nature of Case</u>	Records			<u>Response time</u>	Same Day			<u>Children Involved?</u>	No	Ag	NA
<u>Chemicals Involved:</u>						<u>Other Agencies</u>				<u>Final Action</u>		Target/Complaint Area	
							None			NAI		Records Request	

Request to out of state applicator for records. Pesticide applied in WA./Records sent. Initial NOC issued as records had been sent but apparently not received by WSDA. NOC retracted.

<u>Case#</u> 170-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	Unlicensed	<u>Date</u> 8/18/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 1</u>	Application_Inf	SPI
<u>County</u>	Clark	<u>Nature of Case</u>	License			<u>Response time</u>	Same Day			<u>Children Involved?</u>	No	SPI	NA
<u>Chemicals Involved:</u>						<u>Other Agencies</u>				<u>Final Action</u>		Target/Complaint Area	
							None			NOC		SPI	

Performing Wood Destroying Organism inspections without a license./Verified.

<u>Case#</u> 171-08	2008	<u>Pesticide Involved</u>	No	<u>License</u>	SPI	<u>Date</u> 9/11/2008	<u>Farmworker?</u>	No	<u># People</u>	None	<u>Severity 2</u>	Application_Inf	SPI
<u>County</u>	Thurston	<u>Nature of Case</u>	Faulty	SPI		<u>Response time</u>	One Day			<u>Children Involved?</u>	No	SPI	NA
<u>Chemicals Involved:</u>						<u>Other Agencies</u>				<u>Final Action</u>		Target/Complaint Area	
							None			NOI		Faulty SPI	

Faulty incomplete WDO inspection report./Verified. Repeat offense.

**Agency Data Summary  
Washington State Department of Ecology, Spill Program**

City, ERTS#	Incident Date, Received Date	Medium, Waterway	Material, Quantity	Source	Cause	Impact	Action	Narrative
<b>Benton</b>								
Prosser 604443	3/18/2008 3/17/2008	Roadway – Paved	Pesticide 250 gallons	Burn -open	Human Factor – improper procedures	Unknown	Field Response	250 gallons of Rex lime sulfur had spilled from a JR Simplot truck onto paved road surface.
<b>Clallam</b>								
Ozette 604101	3/3/2008 3/3/2008	Air	Pesticide 4 gallons	Commercial	Human Factor - Other	Potential Pollution /Release	Field Response Investigation	Canisters along Washington's Coastline (March 2008) – Removed dozens of pesticide canisters that washed ashore along the Washington Outer Coast. The canisters contain a pesticide residue that produces a toxic gas when opened and exposed to humidity.
<b>Island</b>								
Clinton 609387	11/7/2008 11/7/2008	Ditch	Herbicide 1 pound	Domestic	Dumping	Unknown	Field Response	Odor was reported by people around neighborhood. Caused by homeowner using herbicide to kill weeds.
<b>King</b>								
Seattle 604915	4/4/2008 4/8/2008	Soil	Herbicide 1 pound	Industrial Facility	Human Factor Unintentional	Soil Contamination	Telephone Assistance	Seattle Parks spray this herbicide near wetlands. The chemical is approved for use in wetlands and he is licensed and following the label. He was filling the sprayer when he spilled an ounce onto soil.
Issaquah 605433	4/30/2008 4/30/2008	Other	Pesticide 1 gallon	Fire -Outdoor	Other	None	Telephone Assistance	Reports that owner of Christmas Tree farm was spraying pesticides around and in Holder Creek.
<b>Multnomah</b>								
Portland 606161	5/30/2008 6/2/2008	Building / Structure	Pesticide	Commercial	Human Factor - Other	Potential Pollution/Relea se	Referral	Both Ecology and Oregon Department of Environmental Quality received report. DEQ handled the incident.
<b>Pacific</b>								
Willapa 608558	9/26/2008 9/26/2008	Surface Water- Fresh	Herbicide 1 pound	Public Agency	Other	Other	Referral	Caller alleges US Fish & Wildlife (USFW) is applying herbicides in the vicinity of an area that has a boat launch/interpretive trail/freshwater ponds (near Willapa Bay).

City, ERTS#	Incident Date, Received Date	Medium, Waterway	Material, Quantity	Source	Cause	Impact	Action	Narrative
<b>Pierce</b>								
Spanaway 606524	6/18/2008 6/19/2008	Surface Water - Fresh	Herbicide 1 pound	Commercial	Human Factor – Intentional	Other	Referral	Caller reporting that NW Aquatics out of Tumwater sprayed Spanaway Lake with an herbicide against his will.
Orting 606291	6/7/2008 6/7/2008	Air	Insecticide	Other	Human Factor - Other	Other	Referral	Complaint that a tree farmer was spraying pesticide or insecticide in the air and endangering his family.

**Washington State Department of Health  
Pesticide Incidents  
Annual Summary Report of Definite, Probable, and Possible Exposures**

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080001	01/01/2008	<p>A 44 y/o female homeowner reports that her pet dog was chewing on a box of slug killer. When she tugged on the box to release it from his teeth, the box tore and product flew into her face and eyes. She reports that ocular symptoms began almost immediately, followed by dermal symptom within the hour. She phoned Washington Poison Center (WPC) and was advised to rinse eyes and skin, which she did. She went to the ER due to pain and swelling in her right eye. Pain resolved one day later and swelling was gone within two days. Pet dog had no symptoms.</p> <p>Multiple (product is classified as multiple classes ...): Metaldehyde</p> <p>1 Possible Severity: Low/Mild</p>
080004	01/06/2008	<p>A 33 y/o male sprayed his apartment with an OP containing product intended for use on dogs. He experienced neurological symptoms about 20 minutes into application to carpets, sofa, and other surfaces. He continued applying for about one hour. The next day his symptoms continued and he contacted WA Poison Center for advice. He went to the VA Hospital ER two days after initial exposure. Symptoms had lessened on interview one week after exposure, but some still were present. He felt that he was getting better. Interestingly, he reports that ten days before applying the dog spray product, he had applied two foggers to his apartment with no difficulty.</p> <p>Insecticide (excluding solely IGR and fumigants): Methoprene, S-; Tetrachlorvinphos</p> <p>1 Possible Severity: Low/Mild</p>
080006	01/14/2008	<p>A 21 y/o female was prescribed permethrin 5% skin cream, during visit to ER, as treatment for scabies. About four hours after application she reports experiencing increase in dermal symptoms, respiratory symptoms, and difficulty swallowing. She contacted WPCr and was instructed to contact 911 emergency responders and wash product off immediately. She showered and rested for a few minutes, and says her breathing was almost normal after showering, when she spoke with emergency responders by phone. On interview with DOH investigator three days after exposure, she reported that respiratory symptoms lasted about two hours and though dermal symptoms (itch from scabies) continue, the swelling and difficulty swallowing lasted about one hour. She planned to follow-up with PMD but due to cost, had not yet done so.</p> <p>Unknown: Permethrin, mixed cis,trans (ANSI)</p> <p>1 Possible Severity: Low/Mild</p>
080008	01/16/2008	<p>A 6 y/o male found a travel size container of insect repellent among siblings camping equipment and sprayed himself in the eye. He was seen at ER for mild ocular symptoms.</p> <p>Insect repellent: Diethyl-meta-toluamide and other isomers, N,N-</p> <p>1 Definite Severity: Low/Mild</p>
080009	01/26/2008	<p>A 19 m/o old was found in the laundry room of her home after having sprayed a pyrethrin aerosol and laundry stain remover over herself, including face and eyes. She was crying and rubbing eyes and she smelled of the pesticide. Her mother put her in the bathtub and washed her eyes and hair. She noticed ocular symptoms. The next morning the mother reports that her eyes were swollen shut, and she took her to the ER for treatment. Symptoms had subsided by 4 days post exposure.</p> <p>Insecticide (excluding solely IGR and fumigants): Permethrin, mixed cis,trans (ANSI); Allethrin, d-</p> <p>1 Probable Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080010	01/23/2008	<p>Elementary school administration directed Kinder-2nd grade teachers to spray the hoods of their students' coats in the hallway with an aerosol lice insecticide not for use on clothing. The clothing was sprayed during mid-morning recess and the school day ended at 1:30pm. There was no prior or post notification of the insecticide application, only a note sent home the day of the spraying regarding the lice outbreak. The spraying exposed a child with documentation on file with the school for asthma and sensitivity to chemicals. The child experienced asthma attacks and missed one day of school. Another student experienced headache and nausea. Other students reported headache. Children did not seek medical care. WSDA investigated the incident and found coats sampled were positive for residue. Students with health effects above did not have sprayed coats, but were exposed to indoor air following the application. The school was fined for multiple violations.</p> <p>Insecticide (excluding solely IGR and fumigants): Permethrin, mixed cis,trans (ANSI)  2 Probable  Severity: (2) Low/Mild</p>
080011	01/22/2008	<p>A 72 y/o female with prior health conditions had her home treated for a persistent flea problem on multiple occasions. During the most recent application, she stayed indoors while pyrethroid was applied. She developed headache and runny nose and sought medical attention. She experienced high blood pressure, but also has a history of heart irregularities. The home does not have good ventilation, a requirement on the pesticide label.</p> <p>Insecticide (excluding solely IGR and fumigants): Deltamethrin, Bifenthrin (ANSI)  1 Possible  Severity: Low/Mild</p>
080014	02/12/2008	<p>A 31 y/o male had an ocular exposure to a moss removal product. He sought health care the following day. He was referred by optometrist to an ophthalmologist for follow up. Patient did not return phone calls to DOH.</p> <p>1 Definite  Severity: High/Severe</p>
080015	02/20/2008	<p>A 26 y/o female student, another student, and two instructors at a community college developed headache, dizziness, and other health effects after four herbicides were applied throughout the college campus at which they studied and worked. There were other reports of ill persons, but DOH follow-up was limited to these four. WSDA investigated and observed herbicide residue and noted the noxious odor around the campus. There was one notification flag in an area treated the week before. WSDA did not find any notable pesticide violations. The college's maintenance director informed that herbicide use was uncommon and that any future applications would be made during breaks when students and staff weren't on campus.</p> <p>Herbicide/algicide: Dichlobenil (ANSI), Butoxyethyl 2,4-dichlorophenoxyacetate; Butoxyethyl triclopyr, Glyphosate, isopropylamine salt, Trifluralin (ANSI); Isoxaben (ANSI)  1 Definite  Severity: Low/Mild  3 Probable  Severity: (3) Low/Mild</p>
080017	02/22/2008	<p>A 23 y/o male set off a fogger in his basement. One hour later he returned to the basement for about 15-30 minutes, forgetting that he had discharged the fogger. There is no ventilation in the basement and he did not recall a strong smell. He reported neurological and respiratory symptoms. He sought health care five days later for continuing symptoms.</p> <p>Insecticide (excluding solely IGR and fumigants): Pyrethrins; Permethrin, mixed cis,trans (ANSI); N-octylbicycloheptene dicarboximide  1 Possible  Severity: Low/Mild</p>
080018	03/02/2008	<p>A 3 y/o boy climbed on a washing machine to reach product from an upper shelf at his home around 7:30 PM. He wore cotton long pants, no shirt, no shoes. He sprayed product all over his body, saturating his pants. Mother noticed son about ten minutes after exposure, and reports symptoms; skin red and blistered, like a burn, all over his body, swelling of arms and face. She bathed him immediately and called poison control, who told her to take child to the ER. Child was transported by ambulance to ER. Rash reduced to torso only after two hours and resolved after 24 hours.</p> <p>Insecticide (excluding solely IGR and fumigants): Pyrethrins; Piperonyl butoxide; Permethrin, mixed cis,trans (ANSI)  1 Definite  Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080021	03/11/2008	<p>A 38 y/o woman was recovering from surgery when a neighbor set off a bug bomb in their apartment building. The product was apparently transported to the case's apartment through the air vents. She and her roommate could smell pesticide. She developed respiratory, gastrointestinal, and neurological symptoms and sought health care at the ER. She reported symptoms lasted approximately three days.</p> <p>Insecticide (excluding solely IGR and fumigants): Permethrin, mixed cis,trans (ANSI); Tetramethrin (ANSI)</p> <p>1 Probable Severity: Low/Mild</p>
080022	03/12/2008	<p>A 67 y/o male hauled wood posts treated less than a week previous with pentachlorophenol and diesel. He touched the posts with bare hands once while handling. Later that day his hands were red, itchy and swollen. Where the posts had contacted his body (clothed) there were itchy welts/hives. These moved all over his body. He called WPC late that night, then went to the clinic the next day. The pesticide label did not set wait times for handling posts after treatment.</p> <p>Insecticide and fungicide (1 and 4): Pentachlorophenol</p> <p>1 Definite Severity: Low/Mild</p>
080024	03/18/2008	<p>A 39 y/o female drove past apple orchards being sprayed and experienced acute respiratory and neurological health effects. She turned around to go to the hospital and reports being sprayed again as she passed the orchard. She went to the emergency room. Some, but not all of the symptoms were consistent with the exposure described. WSDA investigated and found her vehicle positive for residues of the toxicity Class I insecticide being applied.</p> <p>Insecticide (excluding solely IGR and fumigants): Deltamethrin, Kaolin, Piperonyl butoxide, Mineral oil - includes paraffin oil from 063503</p> <p>1 Probable Severity: Low/Mild</p>
080025	03/22/2008	<p>A 49 y/o male was transferring herbicide into another container when the tube that inserts into the container flipped on the edge and splashed the product into his eye. He immediately developed ocular symptoms. He irrigated his eye and called WPC. Three hours later, he obtained treatment at the emergency department. Symptoms subsided about 24 hours after exposure.</p> <p>1 Definite Severity: Low/Mild</p>
080027	03/27/2008	<p>A 43 y/o male was cutting wood at his workplace when a chip got into his right eye. EMS at his worksite assessed him, noting eye irritation and flushed. They did not observe foreign material in his eye. The wood was identified as having been pressured treated.</p> <p>Unknown: Copper naphthenate</p> <p>1 Possible Severity: Low/Mild</p>
080031	04/03/2008	<p>A 32 y/o male farmworker reported he developed gastrointestinal and neurological symptoms after he used orchard grass as dental floss to clean his teeth. He sought medical treatment the same day. Patient loss to follow-up.</p> <p>Insect Growth Regulator (IGR): Pyriproxyfen</p> <p>Insecticide (excluding solely IGR and fumigants): Endosulfan (ANSI), Kaolin, Mineral oil - includes paraffin oil from 063503</p> <p>1 Possible Severity: Low/Mild</p>
080033	04/02/2008	<p>A 48 y/o male inhaled insecticide dust when he put the bag on the floor of his garage. He felt neurological and respiratory symptoms along with nausea and sought medical attention the next day.</p> <p>Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Metaldehyde</p> <p>1 Possible Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080034	04/04/2008	<p>An adult female resident of orchard housing was sprayed as she entered her home by an air blast application of insecticides to several pear trees, approximately ten feet in front of her door. Symptoms were mild and she did not seek health care. This row of pear trees had been hand sprayed in the past.</p> <p>Insecticide (excluding solely IGR and fumigants): Kaolin, Endosulfan (ANSI), Lambda-cyhalothrin, Petroleum distillate, oils, solvent, or hydrocarbons; also paraffinic hydrocarbons, aliphatic hydrocarbons, paraffinic oil</p> <p>1 Probable Severity: Low/Mild</p>
080035	04/05/2008	<p>A 31 y/o female was exposed to an "outdoor fogger" when it discharged inside an apartment at a party she was attending. She had immediate onset of respiratory symptoms, followed by neurological symptoms after 15 minutes. She sought health care at hospital ER. Symptoms improved within six hours, but complained of weakness for the next several days.</p> <p>Insecticide (excluding solely IGR and fumigants): Permethrin, mixed cis,trans (ANSI); Tetramethrin (ANSI)</p> <p>1 Probable Severity: Low/Mild</p>
080036	03/14/2008	<p>A 30 y/o male apple applicator became ill after spraying for three hours. He was wearing a respirator, but said he could smell the spray and felt mist on his face. A few hours later he went to ER for treatment.</p> <p>Insecticide (excluding solely IGR and fumigants): Endosulfan (ANSI), Petroleum distillate, oils, solvent, or hydrocarbons; also paraffinic hydrocarbons, aliphatic hydrocarbons, paraffinic oil</p> <p>Insecticide and fungicide (1 and 4): Sulfur</p> <p>1 Possible Severity: Moderate</p>
080037	04/03/2008	<p>A 33 y/o female developed sore throat, headache and difficulty breathing after parts of their apartment were sprayed for ants earlier in the day. She improved after opening windows. Her toddler son and husband both got sick the following day with fever and gastrointestinal symptoms. All three members suffered vomiting over the span of seven days following the application. Only the child and husband saw a health care provider. Unlikely that husband and toddler's symptoms were related, however initial symptoms of wife may possibly be associated with application.</p> <p>Insecticide (excluding solely IGR and fumigants): Fipronil</p> <p>1 Possible Severity: Low/Mild</p>
080038	04/06/2008	<p>A 46 y/o female reports spraying an organophosphate aerosol product on a carpet for fleas. She sprayed carpet in shed and it was an old cancelled product she had. After two minutes she started have coughing and soon experienced gastrointestinal and respiratory symptoms. She then went in and showered and symptoms improved. One hour later she re-entered the shed to clean it out and shake out the carpet and reports being covered with residue dust and experienced respiratory, gastrointestinal, cardiac and neurological symptoms. She sought health care the next day. Symptoms resolved about 28 hours post exposure.</p> <p>Unknown: Diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate, O,O-</p> <p>1 Probable Severity: Low/Mild</p>
080039	04/11/2008	<p>A 25 y/o female cashier at a retail store set down a box of slug bait and the dust, from an unobserved tear, puffed up on to her face and into her mouth. She experienced pain and irritation immediately and gastrointestinal problems for two consecutive nights. She notified co-workers prior to washing off. She was seen at a clinic the following day.</p> <p>Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Metaldehyde</p> <p>1 Possible Severity: Low/Mild</p>
080040	04/12/2008	<p>A 2 y/o female's eyes were irritated after she sprayed herself with product left outside all year. Parent rinsed eyes and took her to ER.</p> <p>Insecticide and fungicide (1 and 4): Triforine (ANSI); Acephate (ANSI); Fenbutatin-oxide</p> <p>1 Definite Severity: Low/Mild</p>



<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080041	04/20/2008	<p>A 59 y/o male applied herbicides to his lawn on a windy afternoon. He used both a backpack sprayer and a spreader. Afterward, he washed only his face and hands and did not shower or change clothing. That night, he developed gastrointestinal and neurological symptoms. The next day he called WPC and saw his health care provider that afternoon. He felt better that evening and resumed normal activities the next day.</p> <p>Herbicide and Fungicide (03 &amp; 04): Ferrous sulfate monohydrate  Herbicide/algicide: Ferric sulfate, Dicamba, dimethylamine salt; MCPA, dimethylamine salt; Triclopyr  1 Possible  Severity: Low/Mild</p>
080047	04/21/2008	<p>A 12 y/o female washed an apple, then ate three bites and experienced symptoms. Her tongue felt tingly and her face swelled. She had gastrointestinal symptoms and was seen at the emergency room. She had no food allergies or history of reactions. The apple was sitting on the counter when a roach aerosol was sprayed earlier in the kitchen.</p> <p>1 Probable  Severity: Low/Mild</p>
080048	04/29/2008	<p>A 39 y/o female reported respiratory congestion after an attic in home was treated with insecticide. Attic was separate from living space and she did not leave the premises during fogging by professional. Respiratory symptoms progressed until she sought health care six days later. This person has history of respiratory impairment.</p> <p>Insecticide (excluding solely IGR and fumigants): Pyrethrins; Piperonyl butoxide, Bifenthrin (ANSI), Permethrin, mixed cis,trans (ANSI)  1 Possible  Severity: Moderate</p>
080049	04/24/2008	<p>A 22 y/o male worker was spraying for mold at a rental property. The spray hose fell off the hand pump sprayer and sprayed him in the face. He was not wearing required PPE. He decontaminated his eye immediately with an eye wash bottle and sought health care.</p> <p>Disinfectant/broad spectrum for water sanitation: Sodium hypochlorite  1 Definite  Severity: Low/Mild</p>
080050	05/07/2008	<p>A 74 y/o male sprayed herbicide at his residence to control blackberries. The only PPE worn were gloves. He developed gastrointestinal health effects an hour after he finished spraying. He saw a physician the following morning.</p> <p>Herbicide/algicide: Butoxyethyl 2,4-dichlorophenoxyacetate; Butoxyethyl triclopyr  1 Possible  Severity: Low/Mild</p>
080051	05/07/2008	<p>A 24 y/o female felt light must on her face outside of her home as a commercial applicator applied herbicides to weeds ten feet away. She developed temporary ocular and facial irritation but did not seek medical attention. Her husband was outside also, but did not report health effects. WSDA investigated and collected swab samples. Clothing of symptomatic person was positive for the herbicides applied.</p> <p>Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate, Glyphosate, isopropylamine salt, Diuron (ANSI)  1 Probable  Severity: Low/Mild</p>
080053	05/02/2008	<p>A 34 y/o male herbicide applicator received an eye exposure when he opened a spray tank and product sprayed into his right eye. Goggles were available but not worn at time of incident. Patient sought medical care the next day.</p> <p>Herbicide/algicide: Alachlor (ANSI)  1 Definite  Severity: Low/Mild</p>
080055	05/12/2008	<p>A 57 y/o female at home noticed an odor. She went outside and saw her neighbor applying an aerosol spray to base of his house about 20 feet away. She experienced immediate onset of respiratory symptoms. She has history of asthma. She later experienced neurological symptoms and went to the emergency room. Asthma symptoms lasted about two days, other symptoms resolved about five hours post exposure.</p> <p>1 Probable  Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080056	05/13/2008	<p>A 64 y/o male went outside to hose off his yard when he felt mist and noted a mild odor from adjacent orchard application..He showered afterward and developed upper respiratory irritation. He did not seek medical attention. WSDA investigated.</p> <p>Insecticide (excluding solely IGR and fumigants): Methoxyfenozide  Insecticide and other: Carbaryl (ANSI)  Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Cytokinin (as kinetin)  1 Probable  Severity: Low/Mild</p>
080057	05/06/2008	<p>A 4 y/o male removed the towel on his face while his mother applied lice shampoo to his hair. The shampoo got in his eye and the eye was flushed. He awoke the next morning and could not open his eye. He was taken to an ophthalmologist and diagnosed with corneal abrasion.</p> <p>Unknown: Pyrethrins, Piperonyl butoxide  1 Definite  Severity: Moderate</p>
080058	05/13/2008	<p>A 39 y/o male applying herbicides in a hop field presented at the ER with ocular and systemic symptoms from applying. He told MD that wind came up and blew spray back in his face. DOH was unable to contact the worker for follow-up interview on exposure details.</p> <p>Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate, Paraquat dichloride, Carfentrazone-ethyl  1 Possible  Severity: Low/Mild</p>
080059	05/16/2008	<p>An adult female was in her yard and smelled pesticide drifting from neighbors cherry orchard. She could see that the applicator was completely covered in PPE. She developed nausea, headache, but did not seek health care. WSDA investigated the applicator and found license had expired and application records incomplete. No samples were collected.</p> <p>Fungicide: Fenarimol (ANSI)  Insecticide (excluding solely IGR and fumigants): Spinosad (proposed common name for FactorA+FactorD) (110003+110004)  1 Possible  Severity: Low/Mild</p>
080060	02/22/2008	<p>A 54 y/o female agricultural researcher developed mild eye irritation after entering a field four hours following an application with of a granular herbicide with a 24 hour re-entry. The researcher needed to seed the field before rainstorms. She wore PPE but wasn't sure that goggles fit properly. She consulted an eye doctor.</p> <p>Herbicide/algicide: Ethalfluralin  1 Possible  Severity: Low/Mild</p>
080061	05/15/2008	<p>A 59 y/o male homeowner experienced burning sensation in his eyes after spraying the eves of his home for bees. He irrigated his eyes at home that evening. He sought medical attention the next morning.</p> <p>Insecticide (excluding solely IGR and fumigants): Lambda-cyhalothrin; Prallethrin  1 Probable  Severity: Low/Mild</p>
080063	05/19/2008	<p>A 63 y/o female reported respiratory and neurological health effects after she felt and inhaled drift from nearby application to trees in the parking lot at the race horse facility. She did not seek medical attention. WSDA investigated revealed negative results from samples taken for the pesticide applied.</p> <p>Fungicide: Propiconazole  Insecticide (excluding solely IGR and fumigants): Imidacloprid  1 Possible  Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080064	05/05/2008	<p>A 36 y/o male sprayed apples and developed a pruritic rash on his body. He wore full protection. He sought health care two weeks after initial symptoms.</p> <p>Fungicide: Triflumizole</p> <p>Insecticide (excluding solely IGR and fumigants): Acetamiprid, Petroleum distillate, oils, solvent, or hydrocarbons; also paraffinic hydrocarbons, aliphatic hydrocarbons, paraffinic oil</p> <p>Insecticide and fungicide (1 and 4): Sulfur</p> <p>1 Probable</p> <p>Severity: Low/Mild</p>
080065	05/03/2008	<p>A 64 y/o male pesticide handler developed respiratory symptoms during a ten day period of spraying with an orchard air blast sprayer. He was wearing all required PPE but had trouble with a loose respirator for several days. He reported that he could smell the chemical through the mask. When he notified his supervisor, the mask fit was corrected. He sought medical care for respiratory and systemic symptoms. Systemic symptoms may not have been related.</p> <p>Fungicide: Bacillus pumilus strain QST 2808</p> <p>Insecticide and fungicide (1 and 4): Sulfur</p> <p>1 Probable</p> <p>Severity: Moderate</p>
080068	05/21/2008	<p>A 40 y/o female had ocular symptoms after lice shampoo got in her eye. She sought medical care two days later and was diagnosed with corneal burn. DOH was unable to contact her for further information or obtain medical documentation.</p> <p>Unknown: Pyrethrins</p> <p>1 Possible</p> <p>Severity: Low/Mild</p>
080069	05/21/2008	<p>A 27 y/o male at work treated a roof for moss build-up. The wind blew the dust back in his face. He had no immediate symptoms but developed a flare-up of oral mouth condition the next day. He sought medical care. It is possible that moss-out exposure exacerbated condition.</p> <p>Unknown: Zinc chloride</p> <p>1 Possible</p> <p>Severity: Low/Mild</p>
080070	05/27/2008	<p>A 24 y/o farm mechanic stepped out of the garage and was hit by spray from a ground application to orchard. He felt the mist on his face and hands and took a breath of it before stepping back into the garage. About five minutes later he experienced neurological and gastrointestinal symptoms. He continued working and after his shift, sought health care about three hours after exposure. He reports that his symptoms eased after 24 hours, but he continued to feel weak and tired for about three days.</p> <p>Insecticide (excluding solely IGR and fumigants): Imidacloprid</p> <p>1 Possible</p> <p>Severity: Low/Mild</p>
080071	05/27/2008	<p>A 70 y/o male had accidental eye exposure from a herbicide when hose came off sprayer while spraying weeds in yard. Wore eye glasses and not protective eye wear as label required. He flushed his eyes and sought treatment at the ER.</p> <p>Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate</p> <p>1 Probable</p> <p>Severity: Low/Mild</p>
080072	05/28/2008	<p>A 47 y/o male tried to activate a bug bomb and the plastic release mechanism broke in three pieces. He continued to try and activate it and was sprayed with insecticide directly to his face and eyes. He went to the doctor and lost two days of work due to vision problems.</p> <p>Insecticide (excluding solely IGR and fumigants): Cypermethrin (ANSI)</p> <p>1 Possible</p> <p>Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080073	05/28/2008	<p>A 64 y/o male was opening an insecticide product when the lid broke, and product splashed into his left eye. Onset of ocular symptoms began within two minute of exposure. He rinsed his eyes and then went to the ER. He was referred to an ophthalmologist and said notable symptoms lasted about two days, but abrasion of eye lasted longer.</p> <p>Insecticide (excluding solely IGR and fumigants): Permethrin, mixed cis,trans (ANSI)</p> <p>1 Definite Severity: Low/Mild</p>
080074	05/26/2008	<p>A 21 y/o male reports rinsing out three barrels of moss control product. One each day over three day period. To remove the water/pesticide solution he made a siphon with a section of garden hose and began siphoning solution with his mouth. He reported gastrointestinal and respiratory symptoms after about 15 minutes into the activity. With worsening symptoms each day after repeated exposure he presented at clinic on afternoon of the third day and was directed to the ER. He did not arrive at ER. Symptoms lasted three and one half days.</p> <p>Fungicide: Sodium o-phenylphenate</p> <p>1 Possible Severity: Low/Mild</p>
080076	05/30/2008	<p>Three male apple thinners experienced systemic symptoms. A crew of 23 was inadvertently sent to thin in an orchard sprayed nine days earlier. The crew had been in the orchard about 5-10 minutes when supervisors realized the REI had not expired and they removed the workers from the area. All workers washed, the three workers who reported being ill were sent to the clinic. The other workers went to another block to thin.</p> <p>Insecticide (excluding solely IGR and fumigants): Azinphos-Methyl</p> <p>3 Possible Severity: (3) Low/Mild</p>
080077	05/12/2008	<p>A 40 y/o farm worker was tying cabbage and told to leave as they were going to spray the field. He reported the applicator, non-farm employee told him to back to work. One half hour later he became ill. Management indicates he was told not to go back in the field. When symptoms didn't resolve he sought health care three days later.</p> <p>Fungicide: Iprodione (ANSI), Boscalid</p> <p>1 Probable Severity: Low/Mild</p>
080079	05/09/2008	<p>A 31 y/o unlicensed maintenance worker for a landscaping company began his workday setting up backpack sprayer to apply herbicide at a residence. The nozzle was caught, and then the spray tip hit him in the eye. He felt the herbicide contact his eye and was painful. The physician noted corneal abrasion. His eyes were unprotected at the time. Protective eye wear is required by the label.</p> <p>Herbicide/algicide: Glyphosate, isopropylamine salt</p> <p>1 Probable Severity: Low/Mild</p>
080080	05/28/2008	<p>Five adult workers were planting cherry trees when they felt and/or smelled pesticide from an application to a neighboring cherry orchard 30-35 ft. away. Workers reported dermal and systemic symptoms, some of which persisted over a week. All eventually sought medical assessment. WSDA investigated and samples of worker clothing and foliage were positive for pesticides involved.</p> <p>Fungicide: Quinoxifen</p> <p>Insecticide (excluding solely IGR and fumigants): Azinphos-Methyl</p> <p>5 Probable Severity: (5) Low/Mild</p>
080082	06/04/2008	<p>A 53 y/o female opened the door and inhaled some mist during an application to her plants that she requested of a PCO. She sought health care and spoke briefly with DOH, but attempts to complete interview were unsuccessful.</p> <p>Fungicide: Myclobutanil (ANSI)</p> <p>Insecticide (excluding solely IGR and fumigants): Imidacloprid</p> <p>1 Possible Severity: Low/Mild</p>

Case	Exp Date	Incident Description
080083	06/08/2008	<p>A 30 y/o female developed systemic symptoms after applying a mix of products in her home and yard. She used two insecticide granulars and an herbicide spray. She does not recall direct contact with pesticides during the applications. She sought medical care at the local emergency department. DOH followed-up on product she had ordered from internet. This product tested positive for mirex at the WSDA lab. Case was referred to EPA for enforcement.</p> <p>Herbicide/algicide: Glyphosate, isopropylamine salt; Imazapyr, isopropylamine salt  Insecticide (excluding solely IGR and fumigants): Bifenthrin (ANSI)  Unknown: Mirex  1 Possible  Severity: Moderate</p>
080091	05/28/2008	<p>A 59 y/o female security guard developed neurological and gastrointestinal health effects working in the smaller than 100 square feet guard station in which a fellow employee had sprayed an outdoor use only insecticide. The employee also left a bowl of the same insecticide in the room for wasp control. The security guard went to the ER and health care staff instructed the employer to professionally clean the guard station before allowing worker entry.</p> <p>Insecticide (excluding solely IGR and fumigants): Piperonyl butoxide; Permethrin, mixed cis,trans (ANSI); Tetramethrin (ANSI)  1 Possible  Severity: Low/Mild</p>
080093	05/26/2008	<p>A 19 y/o female and 25 y/o male developed mild systemic symptoms after smelling pesticide odor from application near where they were working. Both went to the ER the same day. When reported to crew supervisor the crew of seven people were moved to another field away from the application. No others reported an illness.</p> <p>Fungicide: Triflumizole  Insecticide (excluding solely IGR and fumigants): Azinphos-Methyl  2 Possible  Severity: (2) Low/Mild</p>
080094	06/05/2008	<p>A 20 y/o male farmworker developed dermal symptoms while clipping new growth on cherries in an organic orchard. The cherry block had been sprayed the day previous. The worker did not seek medical care until four days after onset of symptoms.</p> <p>Fungicide: Carbonic acid, monopotassium salt, Bacillus pumilus strain QST 2808  1 Probable  Severity: Low/Mild</p>
080099	06/19/2008	<p>A 17 y/o boy applied four times the recommended amount of herbicide granules by hand; to his grandparent's yard. He had started with gloves but had removed them sometime during the application and was wearing a cotton T-shirt, jeans, and sneakers. His mother reports that he was out for about 15 minutes when he entered the home and experienced observable gastrointestinal and neurological signs. Product granules were visible in hair, on skin and clothes. His grandfather helped him into the shower. EMT arrived and assisted him out of shower and transported him by boat to nearest hospital. Symptoms resolved approximately three hours after exposure.</p> <p>Herbicide/algicide: Dichlobenil (ANSI)  1 Possible  Severity: Low/Mild</p>
080101	06/18/2008	<p>A 60 y/o female was outside her home and was applying insect repellent on family members and self when some sprayed in her left eye. She felt immediate ocular symptoms and rinsed her eye. Her symptoms improved initially but returned the next day. She sought health care and was treated. Symptoms resolved by five days post exposure.</p> <p>Insect repellent: Diethyl-meta-toluamide and other isomers, N,N-  1 Definite  Severity: Low/Mild</p>
080102	06/21/2008	<p>A 45 y/o male was splashed in the eye with herbicide as he filled the concentrate in container with water from the hose. He wore safety glasses, but the water splashed up under the safety glasses. He flushed eyes immediately and was seen in a clinic.</p> <p>Herbicide/algicide: Triethylamine triclopyr  1 Definite  Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080105	06/23/2008	<p>A 20 y/o female was sprinkling slug bait on soil around strawberry plants when a gust of wind blew-back dust in her face and she inhaled. She reports immediate onset of respiratory symptoms and shortly thereafter dermal and neurological symptoms. She went into her house and rinsed her face. She continued to feel bad so she went to ER. She reports her symptoms lasted six hours and that she had used product two weeks before with no difficulty.</p> <p>Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Metaldehyde</p> <p>1 Possible Severity: Low/Mild</p>
080106	06/23/2008	<p>A 19 m/o experienced symptoms a day after five foggers were discharged in the single wide mobile home where she lived with her mother and her mother's friend. She had been out of the home during the application, returning at 10:00 PM that night, approximately eight hours after product discharge, and was put to bed. The home was ventilated one hour prior to her return, but toys had been left out on carpet and in crib. Her mother noticed respiratory symptoms and irritable behavior about two hours after she was placed on the carpet in the morning. The following day, she experienced gastrointestinal symptoms and was taken to the ER. Mother reports symptoms improved when she was taken out of the home and returned when she came back. Mother and daughter left the home and stayed with relatives while home and toys were thoroughly cleaned. Symptoms lasted about two days.</p> <p>Insecticide (excluding solely IGR and fumigants): Cypermethrin (ANSI)</p> <p>1 Possible Severity: Low/Mild</p>
080108	06/25/2008	<p>A 19 y/o, before work discharged a fogger in his living room He tripped over the canister on his way out and it discharged over his skin and clothes. He reports past history of sensitivity to aerosol products. He experienced gastrointestinal symptoms within five minutes of his exposure. One hour later a friend drove him to the ER when symptoms became more severe. Symptoms lasted about three hours.</p> <p>1 Possible Severity: Low/Mild</p>
080111	06/13/2008	<p>A 24 y/o applicator spraying apples and reported he had spray drip down his forehead and behind his goggles. He stopped and rinsed his eyes. Ocular symptom continued and he sought medical care two days later.</p> <p>Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Ethephon (ANSI)</p> <p>1 Definite Severity: Low/Mild</p>
080112	05/28/2008	<p>A 26 y/o male developed dermal symptoms after working in an apple orchard that was sprayed approximately 19 hours earlier. The employee entered the field five hours before the completion of the restricted entry interval. He sought medical care two days later.</p> <p>Fungicide: Pyraclostrobin; Boscalid Insecticide and fungicide (1 and 4): Sulfur</p> <p>1 Probable Severity: Low/Mild</p>
080115	06/14/2008	<p>A 31 y/o male dairy worker presents to ER with demal symptoms. He developed symptoms after he did his clean up duties wearing an overall kept in room where product had been applied.</p> <p>Insecticide (excluding solely IGR and fumigants): Cyfluthrin</p> <p>1 Possible Severity: Low/Mild</p>
080116	06/14/2008	<p>A 34 y/o male applying herbicides in hop field experienced dermal symptoms. He was wearing all required PPE. He stopped to take a break and washed his hands. His contaminated coveralls touched his skin and he felt immediate burning sensation. When symptoms did not resolve he sought medical care two days later.</p> <p>Herbicide/algicide: Paraquat dichloride</p> <p>1 Definite Severity: Low/Mild</p>

Case	Exp Date	Incident Description
080117	07/18/2008	<p>A 51 y/o female developed respiratory health effects and light headedness after exposure to herbicide applied to her neighbor's land. WSDA investigated and residual samples from her land were positive for drift from the application made to the adjacent yard. She went to the ER after first consulting the fire department. WSDA issued a Notice of Correction to the commercial applicator for label violations related to the drift and for not providing the minimum two hour notification of spraying required by the neighbor.</p> <p>Herbicide/algicide: 1 Definite Severity: Low/Mild</p>
080118	06/16/2008	<p>A 27 y/o male licensed applicator sprayed weeds with a backpack sprayer. His back felt cool and he mistook leaking herbicide for sweat. He later realized that the cap had cracked probably during transport. He developed a painful, itchy rash on his back and neck along with nausea and malaise. He sought medical care at a clinic.</p> <p>Herbicide/algicide: Glyphosate, isopropylamine salt, Diquat dibromide 1 Definite Severity: Low/Mild</p>
080119	06/27/2008	<p>A 12 y/o boy, playing in the park, walked through a mist of DEET. He felt immediate onset of ocular symptoms and bad taste in his mouth. He spit and rubbed his eyes. Two hours later he developed dermal symptoms and his mother took him the clinic. Treated, his dermal symptoms resolved and ocular symptoms resolved within three days.</p> <p>Insect repellent: Diethyl-meta-toluamide and other isomers, N,N- 1 Probable Severity: Low/Mild</p>
080123	07/06/2008	<p>A 44 y/o male developed headache and nausea after applying herbicides for nearly 5 hours on his yard. Respiratory protection was not worn, or required. But patient reports he did have "fair amount" of inhalation. Case sought medical care the same day.</p> <p>Unknown: Glyphosate, isopropylamine salt, 2,4-dichlorophenoxyacetic acid, Triclopyr 1 Possible Severity: Low/Mild</p>
080124	06/13/2008	<p>A 49 y/o male was applying herbicides when he felt mist on face and under his sunglasses. He reports initial ocular symptoms began about ten minutes after feeling the mist. He continued working and ocular symptoms worsened over the next several days. He received medical care ten days after exposure. His ocular symptoms remained at the time of interview, 26 days after exposure.</p> <p>Herbicide/algicide: Glyphosate, isopropylamine salt, Dichlobenil (ANSI) 1 Definite Severity: Moderate</p>
080125	06/18/2008	<p>A 56 y/o male pear applicator sought treatment for dermal conditions which developed while he was spraying. He turned to look back at the sprayer and the top of his protective coverall came open and chemical drifted on to him.</p> <p>Insecticide (excluding solely IGR and fumigants): Azinphos-Methyl, Petroleum distillate, oils, solvent, or hydrocarbons; also paraffinic hydrocarbons, aliphatic hydrocarbons, paraffinic oil, Abamectin (ANSI) 1 Definite Severity: Low/Mild</p>
080126	05/15/2008	<p>An 18 y/o male farm worker reported immediate ocular symptoms after a splash of insecticide to his eye. Splash occurred while he was dipping cabbage starts into open tank prior to planting. No eye PPE is required by the label but this type of open tank application is not allowed on the label. He sought medical care one month later for a cyst in the same eye. Unknown if pesticide exposure contributed to formation of a chalazion.</p> <p>Insecticide (excluding solely IGR and fumigants): Imidacloprid 1 Probable Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080128	06/19/2008	A 34 y/o male spraying hops was splashed in the eyes when he went to close the top of the spray tank. He had ocular symptoms and sought medical treatment the same day. He was wearing safety glasses and not goggles or a face shield as required by the label. Multiple (product is classified as multiple classes ...): Hydrogen peroxide 1 Definite Severity: Low/Mild
080129	06/24/2008	A 31 y/o male herbicide applicator developed intense eye irritation after applying a herbicide. He wore a face shield and reported no known exposure. He sought medical care the same day. Herbicide/algicide: Paraquat dichloride 1 Probable Severity: Low/Mild
080130	06/26/2008	A 41 y/o male temporary worker sprayed weeds for a county agency with other workers of the county. It was a windy day and he was provided safety glasses for protection. Another man sprayed uphill from him and herbicide entered his eye. He went to the hospital after his eye continued to swell painfully after flushing. He lost three days of work Herbicide/algicide: Dimethylamine 2,4-dichlorophenoxyacetate; Diethanolamine (2,4-dichlorophenoxy)acetate, Dicamba, dimethylamine salt; 2,4-dichlorophenoxyacetic acid 1 Definite Severity: Moderate
080131	07/03/2008	A 26 y/o male hop mixer/applicator sought medical care for ocular symptoms. Exposure to right eye occurred while washing the sprayer. He was wearing safety glasses and not protective eyewear. He sought medical care four days later when symptoms continued. Insecticide and fungicide (1 and 4): Sulfur 1 Definite Severity: Low/Mild
080133	06/30/2008	A 45 y/o male pesticide applicator developed gastrointestinal and general symptoms after mixing and spraying two herbicides repeatedly over a month's time. He did not wear appropriate PPE for the job. Herbicide/algicide: Glyphosate, isopropylamine salt, Butoxyethyl 2,4-dichlorophenoxyacetate; Butoxyethyl triclopyr 1 Possible Severity: Low/Mild
080134	07/10/2008	A 61 y/o man brushed against a leaf from the fruit tree he had just sprayed for grubs. He wore no protection, and a large drop of insecticide fell to his eye when he bent over. He immediately felt prickles and a sticky sensation in his eye. He rinsed for over 20 minutes and then went to the ER. Insecticide (excluding solely IGR and fumigants): Lambda-cyhalothrin 1 Definite Severity: Low/Mild
080136	07/02/2008	A 39 y/o female developed a rash and sinus symptoms after an exterior perimeter treatment of insecticide was made to her home. The three products all contained multiple plant oils. She noticed a strong odor of peppermint in the home. All three products are registered WSDA 25B products but no EPA registration number. Unknown: Rosemary Oil, Peppermint Oil, Wintergreen Oil, Vanillin, Mineral oil - includes paraffin oil from 063503, Eugenol, Thyme Oil, 2-phenylethyl propionate, Rosemary Oil 1 Possible Severity: Low/Mild
080137	06/11/2008	A 23 y/o male sought medical care for ocular symptoms that he experienced while spraying an herbicide on blueberry field. He wore goggles but removed them and rubbed his eyes with dirty glove. Herbicide/algicide: Paraquat dichloride, Carfentrazone-ethyl 1 Possible Severity: Low/Mild



<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080139	07/14/2008	<p>A 14 y/o male was watching TV on carpet in his home at 9:00 AM. By 9:10 AM he reports ocular symptoms. He believes his hands touched his eyes, the carpet had been treated two hours before. His mother rinsed his eyes, but noticed ocular and dermal symptoms. She took him to the ER. He was treated and released. He reports feeling better that day after treatment, but some ocular symptoms lasted 2-3 days post exposure.</p> <p>Insecticide (excluding solely IGR and fumigants): Pyrethrins; Octyl bicycloheptene dicarboximide, N-; Pyriproxyfen</p> <p>1 Definite Severity: Low/Mild</p>
080140	07/14/2008	<p>A 33 y/o male sprayed weeds in the garden with wind to his back when the wind suddenly shifted and blew herbicide in his eye. He went to ER and it was flushed.</p> <p>Herbicide/algicide: Glyphosate, isopropylamine salt</p> <p>1 Possible Severity: Low/Mild</p>
080141	07/02/2008	<p>A 44 y/o female returned to her apartment four hours after pesticide application for cockroaches. It smelled very strong. She developed headache and fatigue and awoke the next morning with dermatologic swelling and rash on foot. She sought health care at clinic for symptoms.</p> <p>Insecticide (excluding solely IGR and fumigants): Pyrethrins; Octyl bicycloheptene dicarboximide, N-; Piperonyl butoxide</p> <p>Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Pyriproxyfen</p> <p>1 Possible Severity: Low/Mild</p>
080142	07/15/2008	<p>A 67 y/o male home owner applied a slug and snail bait on his garden. He developed aftertaste and some nasal congestion. He indicated breathing some of the dust and it was windy. He went to the Urgent Care to get checked out later in the day.</p> <p>Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Metaldehyde</p> <p>1 Possible Severity: Low/Mild</p>
080143	07/15/2008	<p>A 60 y/o female developed mild ocular symptoms after she accidentally sprayed herself with an insect repellent. She sought medical attention and was released from an ER the same day.</p> <p>Insect repellent: Diethyl-meta-toluamide and other isomers, N,N-</p> <p>1 Probable Severity: Low/Mild</p>
080144	07/16/2008	<p>A 12 y/o boy hit a repellent canister with a shovel as he played. He thought the canister was empty. The can discharged and sprayed him on the face and eyes. He went to the ER with very mild symptoms, was examined and released.</p> <p>Unknown: Diethyl-meta-toluamide and other isomers, N,N-</p> <p>1 Probable Severity: Low/Mild</p>

Case	Exp Date	Incident Description
080145	07/17/2008	<p>A 36 y/o female, 13 weeks pregnant, her 2 y/o son, a 20 y/o female, a 62 y/o male, and a 49 y/o male developed gastrointestinal, neurological and minor dermal symptoms when they were exposed to insecticidal mist for mosquito control applied at 5am by helicopter to the campground where they stayed. There was no prior notification of the aerial pesticide application to the campground that lasted approximately fifteen minutes. The mother and child were in their tent when the helicopter sprayed; the 20 y/o female felt mist on her face as she looked out from her tent. The 62 y/o male stepped out of his camper and saw smoke and the helicopter flying very low over the campground. He went back in the camper, with the windows closed. The 49 y/o male was exposed briefly when he stepped outside to see what was happening. Persons reported developing symptoms throughout the day; none sought medical attention. Several members of the same party were asymptomatic. WSDA investigated and found no violations for the licensed pilot/applicator. WSDA recommended the campground manager notify patrons of pending applications or cancel plans to apply pesticides.</p> <p>Insecticide (excluding solely IGR and fumigants): Malathion (ANSI)</p> <p>3 Probable Severity: (2) Low/Mild Severity: Moderate</p> <p>1 Unlikely 1 Insufficient Information</p>
080146	07/18/2008	<p>A 52 y/o female sprayed insecticide on window sill for ants. The spray ricocheted off the sill into her eyes twice. WPC referred her to a health care provider and she saw an ophthalmologist several days later.</p> <p>1 Possible Severity: Low/Mild</p>
080147	07/18/2008	<p>A 53 y/o wheat farmer/owner was spraying weeds with a back pack sprayer. Weeds were up to six feet in height and he felt spray on his face. He developed eye irritation and sought medical care. He was not wearing eye protection.</p> <p>Unknown: 2,4-dichlorophenoxyacetic acid, Dicamba, dimethylamine salt, Glyphosate, isopropylamine salt</p> <p>1 Probable Severity: Low/Mild</p>
080148	07/19/2008	<p>A 24 y/o male spraying hops complained of ocular symptoms. He was wearing safety glasses as eye protection, but apparently received a drip into his right eye. DOH interviewed employer but was unable to reach case to determine exactly how exposure occurred.</p> <p>Fungicide: Quinoxifen Insecticide (excluding solely IGR and fumigants): Spirodiclofen, Hexythiazox</p> <p>1 Probable Severity: Low/Mild</p>
080149	07/02/2008	<p>Two males, ages 23 and 43, were tying hops when exposed to drift from an application to adjacent apple orchard, not operated by their employer. Both could smell the spray and shortly thereafter experienced symptoms. They reported the incident to their supervisor who took them immediately to a health care provider.</p> <p>Insecticide (excluding solely IGR and fumigants): Acetamiprid</p> <p>2 Possible Severity: (2) Low/Mild</p>
080151	07/02/2008	<p>Two adult male nursery workers had accidental dermal and ocular exposure to an herbicide. A backpack sprayer set in a vehicle was bumped, resulting in a release and spraying of both workers with the herbicide. Both were seen by a health care provider for symptoms.</p> <p>Herbicide/algicide: Glyphosate, monoammonium salt</p> <p>2 Probable Severity: (2) Low/Mild</p>
080152	07/15/2008	<p>A 7 y/o boy, his 10 m/o brother, and their 17 y/o babysitter developed bloody noses and respiratory irritation after pesticides were applied by a licensed PCO to the baseboards of their home and along the outside perimeter. The home had the windows open and ran the air conditioner. Three other persons in the household developed bloody noses and no other symptoms within two days of the applications. No one sought medical attention and there was no desire to pursue a complaint with WSDA.</p> <p>Insecticide (excluding solely IGR and fumigants): Cyfluthrin, Bifenthrin (ANSI)</p> <p>3 Possible Severity: (3) Low/Mild</p>

Case	Exp Date	Incident Description
080155	07/23/2008	<p>A 32 y/o male switchman foreman, a 46 y/o locomotive engineer, and a 34 y/o switchman assistant were transporting a tank car with 16,000 gallons of restricted use pesticide toxicity Class 1 (danger) fumigant by rail to its destination, a tank farm 13 miles from the rail yard. All three men noticed an odor at times during the three hour ride. In the final 30 minutes of the trip, stain marks were observed leaking from the top of the car, down both sides. They notified personnel at the tank farm and were taken to the hospital for evaluation and released. The local fire district responded to the scene, as did authorities with the railroad and the destination site. DOH HSEES, State Ecology, and EPA Region 10 were notified. A private company was hired to assess environmental impact, cleanup and testing. The estimated amount of release was less than one gallon. Although hazmat responders were aware of the contents in the railcar, healthcare providers and the three workers were only aware of exposure to chloropicrin, not 1, 3 dichloropropene (81% of product). The workers reported respiratory, eye, and gastrointestinal symptoms in addition to severe headache. Some symptoms lasted more than a month after the exposure and all three men sought follow-up healthcare.</p> <p>Fumigant: Chloropicrin; Dichloropropene, 1,3-  2 Definite  Severity: Moderate  Severity: High/Severe  1 Probable  Severity: Low/Mild</p>
080156	07/16/2008	<p>A 30 y/o female was working in a pulpwood farm thinning poplar trees and developed neurological and gastrointestinal symptoms. She was one of 14 workers in a contracted crew. She reported a strong chemical odor. Symptoms persisted for a week and she then sought medical care. Although the case reported one other person had a headache DOH received no other reports.</p> <p>Herbicide/algicide: Glyphosate, isopropylamine salt, 2,4-dichlorophenoxyacetic acid  1 Possible  Severity: Moderate</p>
080157	06/26/2008	<p>A 45 y/o female office worker developed neurological symptoms after arriving at work. Five foggers had been used the night before in an adjoining room. This was more than 10x the recommended amount of foggers for the space. She reported symptom onset by 11:00 AM and went home ill. L&amp;I investigated and cited employer for misuse of pesticide and improper PPE.</p> <p>Insecticide (excluding solely IGR and fumigants): Pyrethrins; Piperonyl butoxide; Cyfluthrin  1 Possible  Severity: Moderate</p>
080158	07/14/2008	<p>A 38 y/o male care giver was accidentally sprayed through open window/door by a pest control operator on left side of face. He immediately washed his face, but experienced skin burning and ocular symptoms. He sought medical treatment three days later continuing symptoms.</p> <p>Insecticide (excluding solely IGR and fumigants): Bifenthrin (ANSI)  1 Definite  Severity: Low/Mild</p>
080160	07/26/2008	<p>A 14 y/o male with scabies developed full body rash and swelling on side of face following application of prescription cream to treat scabies. He developed rash from a similar application in the past. He sought medical care for symptoms.</p> <p>Unknown: Permethrin, mixed cis,trans (ANSI)  1 Definite  Severity: Low/Mild</p>
080161	07/30/2008	<p>A 35 y/o female vineyard worker cutting grass reported she had gastrointestinal and neurological symptoms after pesticide drift exposure from an adjacent orchard. She indicated she smelled the spray and also felt the spray. She was taken by local EMS from her home to the hospital about two hours later. There is dispute on how far the worker was from the application.</p> <p>Insecticide (excluding solely IGR and fumigants): Mineral oil - includes paraffin oil from 063503  Insecticide and other: Azinphos-Methyl  Unknown: 1-Naphthaleneacetic Acid, Potassium Salt  1 Possible  Severity: Moderate</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080162	07/30/2008	<p>An 81 y/o female cleaned up spill in her basement after cat knocked over bottle. Estimated two cups spilled. She wore thin plastic gloves while soaking up spill and scrubbing cement with hot soapy water. She reported mild respiratory symptoms and went to MD on a precaution. The fire department came later and did a thorough clean-up. When smell persisted a professional cleaning service was called to chemically clean and seal the cement.</p> <p>Insecticide (excluding solely IGR and fumigants): Dimethoate (ANSI)  1 Probable  Severity: Low/Mild</p>
080164	07/26/2008	<p>45 y/o female farm worker developed allergic dermal symptoms shortly after working in an onion field. The field had been treated four days prior with Lannate and the REI was met. An aerial application to a neighboring farm was observed 500 feet from the work crew on the day of her symptom onset. The crew was moved away from the aerial application when they smelled pesticide. She sought health care the same day and symptoms resolved shortly after treatment at the ER. She was the only worker out of 11 that reported symptoms.</p> <p>Insecticide (excluding solely IGR and fumigants): Methomyl (ANSI)  Unknown: Methyl parathion, Dimethoate (ANSI)  1 Probable  Severity: Low/Mild</p>
080165	06/19/2008	<p>A 36 y/o female vineyard worker developed an itchy rash on her hands when she left work. She had seen a tractor applying pesticides to pears that day, approximately 150 meters from where she worked. The day was very windy. Her rash dissipated after missing eight days of work, but returned the first day back. She sought medical care and was instructed to miss ten days of work.</p> <p>Insecticide (excluding solely IGR and fumigants): Petroleum distillate, oils, solvent, or hydrocarbons; also paraffinic hydrocarbons, aliphatic hydrocarbons, paraffinic oil, Azinphos-Methyl, Abamectin (ANSI)  1 Probable  Severity: Moderate</p>
080167	07/21/2008	<p>A 28 y/o female temporary worker in a billing office had respiratory difficulty and nausea after a co-worker sprayed ants with an aerosol in same building. She sought health care at emergency room. At least one other co-worker also developed health effects, but attempts to follow-up were unsuccessful.</p> <p>Insecticide (excluding solely IGR and fumigants): Cypermethrin (ANSI); Imiprothrin  1 Possible  Severity: Low/Mild</p>
080170	08/05/2008	<p>A 2 y/o male accidentally sprayed self in the eyes with mosquito repellent. They were red and irritated but were fine once he was examined by a HCP.</p> <p>1 Possible  Severity: Low/Mild</p>
080173	08/06/2008	<p>A 31 y/o male developed neurological, gastrointestinal and respiratory symptoms after an alleged drift exposure from an aerial application. He reported feeling and breathing the spray. He was transported to the ER via ambulance within two hours after the exposure. WSDA tests were positive for residues of one of the pesticides in the tank mix. He responded well to pesticide specific treatment at the ER.</p> <p>Fungicide: Pyraclostrobin  Insecticide (excluding solely IGR and fumigants): Acephate (ANSI), Bifenazate  1 Definite  Severity: Moderate</p>
080180	08/02/2008	<p>A 25 y/o male applicator developed ocular symptoms after a hose on his sprayer broke and spray hit his face. Label did not require eye protection. He sought medical care three days later for continuing symptoms.</p> <p>Herbicide/algicide: Oryzalin (ANSI)  1 Probable  Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080181	07/03/2008	<p>A 56 y/o male was sprayed the interior surface of an empty wheat storage area with a power sprayer with an insecticide. While spraying a breeze blew the product back onto his forehead and eyes. He experienced ocular and dermal symptoms. He was wearing complete PPE including goggles at the time, but thought product ran down his forehead to his eyes. He sought medical care.</p> <p>Insecticide (excluding solely IGR and fumigants): Cyfluthrin  1 Definite  Severity: Low/Mild</p>
080185	08/21/2008	<p>A 27 y/o female released a bug bomb for spiders in her home. She inhaled some of the mist before she could leave the room and had minor respiratory symptoms which lasted about 30 minutes. She called WPC but did not seek medical care.</p> <p>Insecticide (excluding solely IGR and fumigants): Piperonyl butoxide; Permethrin, mixed cis,trans (ANSI); Tetramethrin (ANSI)  1 Possible  Severity: Low/Mild</p>
080188	08/24/2008	<p>A 35 y/o male accidentally ingested an undetermined amount of paraquat herbicide while attempting to siphon it. He sought medical attention the same day. He complained of abdominal pain and burning sensation in the throat. He was hospitalized overnight. DOH was unable to locate the patient for interview.</p> <p>Unknown: Paraquat dichloride  1 Probable  Severity: Moderate</p>
080189	08/10/2008	<p>A 58 y/o male developed health effects after herbicides were applied on neighboring property. He noticed a strong smell and experienced dermal and respiratory symptoms. He has prior respiratory related health conditions; he went to the emergency room the next day. A 38 y/o female at the same property reported minor health effects as did a 23 y/o female neighbor. Neither female sought medical care. WSDA investigated and foliage samples taken from one neighbor were positive. Herbicides were not detected in the other neighbor's property. The applicator mixed herbicides against label indications. Wind records are consistent with the reported drift.</p> <p>The man's health status worsened over the two weeks following the application. His exposure is classified as probable for his initial health effects and is not a likely explanation for persistent symptoms.</p> <p>Unknown: 2,4-dichlorophenoxyacetic acid, Dicamba, dimethylamine salt  1 Probable  Severity: Moderate  1 Possible  Severity: Low/Mild  1 Unlikely</p>
080191	08/06/2008	<p>A 48 y/o male sought medical care for ocular symptoms experienced working in an orchard. He was cutting grass in an orchard he previously sprayed when a branch brushed across his right eye. He immediately rubbed his eye and began experiencing symptoms.</p> <p>Insecticide (excluding solely IGR and fumigants): Cyhalothrin, Gamma  1 Possible  Severity: Low/Mild</p>
080193	08/12/2008	<p>A 33 y/o sewage maintenance specialist was inadvertently sprayed when his co-worker turned around to check leaking pump sprayer while applying a herbicide. The spray burned his skin and dripped into his eyes. He irrigated the eye and went to the emergency department for treatment.</p> <p>Herbicide/algicide: Glyphosate, isopropylamine salt, Butoxyethyl triclopyr  1 Definite  Severity: Low/Mild</p>
080194	08/25/2008	<p>A 67 y/o male developed numbness and altered taste after accidentally applying DEET, instead of PAM, to a cooking skillet and eating a small amount of eggs. He sought medical attention one hour later.</p> <p>Insect repellent: Diethyl-meta-toluamide and other isomers, N,N-  1 Possible  Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080195	08/26/2008	<p>A 30 y/o female developed respiratory, gastrointestinal, and neurological symptoms after spraying approximately eight ounces of an insecticide on a bed. The mattress had been in storage so she wanted to make sure it had no bugs. She indicated smelling the odor, however she did not have skin contact with the product. She sought medical treatment four hours later.</p> <p>Insecticide (excluding solely IGR and fumigants): Lambda-cyhalothrin  1 Probable  Severity: Low/Mild</p>
080196	08/26/2008	<p>A 43 y/o female had acute respiratory and systemic symptoms after inhaling bug fogger. One of the cans tipped over while activating and she returned to right the can. She had immediate symptoms and called 911. She recovered with treatment but had to use asthma inhaler more frequently to control asthma over the following week.</p> <p>Insecticide (excluding solely IGR and fumigants): Cypermethrin (ANSI)  1 Probable  Severity: Low/Mild</p>
080200	05/28/2008	<p>A 20 y/o male applicator developed ocular symptoms while he was mixing a fungicide soluble powder. He was wearing safety glasses, but still some of product go into his an eyes. The label does not require use of eye protection. He sought medical treatment the same day.</p> <p>Fungicide: Carbonic acid, monopotassium salt  Insecticide (excluding solely IGR and fumigants): Mineral oil - includes paraffin oil from 063503  1 Definite  Severity: Low/Mild</p>
080201	09/01/2008	<p>A 21 y/o male vomited and developed headache after he applied an organophosphate flea and tick powder to his cat. The label didn't require PPE.</p> <p>Insecticide (excluding solely IGR and fumigants): Tetrachlorvinphos  1 Possible  Severity: Low/Mild</p>
080202	09/02/2008	<p>A 36 y/o male developed respiratory symptoms when he returned to his apartment and noticed spraying had occurred earlier in the day. He called an ambulance and was taken to the hospital.. He was able to identify the active ingredient the next day. A DOH follow-up interview was not conducted.</p> <p>Unknown: Bifenthrin (ANSI)  1 Probable  Severity: Moderate</p>
080203	08/01/2008	<p>A 31 y/o female home health employee cleaned with bleach diluted with water extensively to abate mold in the bathroom of her clients residence. She experienced multiple respiratory effects, nausea, headache and burning eyes. She also is allergic to mold. She sought health care at clinic and also referred to WISHA for investigation. The investigator did not have enough information to do a field inspection and cited various regulatory limitations with mold related complaints.</p> <p>Unknown: Sodium hypochlorite  1 Possible  Severity: Low/Mild</p>
080205	09/07/2008	<p>A 29 y/o female developed respiratory symptoms after spraying an pyrethroid insecticide. She smelled the spray and started to cough. She was transported to the ER via ambulance and discharged the same day.</p> <p>Insecticide (excluding solely IGR and fumigants): Esfenvalerate; Prallethrin  1 Probable  Severity: Moderate</p>

Case	Exp Date	Incident Description
080207	09/10/2008	<p>Forty-seven of fifty-four apple harvesters, aged 18 to 61, sought medical care after reporting drift from an aerial herbicide application to an adjacent alfalfa field. The incident occurred while many of the workers were eating lunch at the edge of the orchard. Some reported feeling the spray; others only smelled it. Workers reported primarily headache, eye and upper respiratory irritation, and dermal and gastrointestinal symptoms. One worker was asymptomatic. Work was stopped and employees (18 females, 29 males) were sent to clinics in three nearby communities. WSDA investigated and detected residue of the herbicide applied on one of four clothing samples collected. Residues were also found for an insecticide applied to the apple orchard some time earlier for which the REI had been met. Residues of two other pesticides were also detected on clothes of workers for which the origin was unknown.</p> <p>Herbicide/algicide: Clethodim (ANSI)</p> <p>Insecticide (excluding solely IGR and fumigants): Endosulfan (ANSI), Bifenazate</p> <p>3 Definite Severity: (3) Low/Mild</p> <p>7 Probable Severity: (7) Low/Mild</p> <p>36 Possible Severity: (36) Low/Mild</p> <p>1 Insufficient Information</p>
080208	09/11/2008	<p>A 30 y/o male had initial eye, respiratory and dermal symptoms after activating multiple bug bombs at his home. He had to re-enter for 1-5 minutes after activating to retrieve a cell phone. Later that day he was taken to hospital for neurological symptoms. Those were attributed to an ongoing seizure condition.</p> <p>Unknown: Pyrethrins</p> <p>1 Possible Severity: Low/Mild</p>
080209	09/13/2008	<p>A 32 y/o homemaker developed respiratory, neurological and gastrointestinal symptoms after spraying an insecticide. She make only one pass with the spray, however she believed that when spraying along a wall the mist might have traveled to her mouth. She developed cotton mouth almost immediately and in 30 minutes she was shaking, had headache, and nausea. She sought medical treatment the same day.</p> <p>Insecticide (excluding solely IGR and fumigants): Lambda-cyhalothrin; Prallethrin</p> <p>1 Possible Severity: Low/Mild</p>
080212	08/16/2008	<p>A 30 y/o female developed ocular, neurological, and dermal symptoms after spraying a plant growth regulator with adjuvants. She felt the spay on her face, mouth and clothing. She sprayed product for about one week and was not wearing some of the required PPE. She sought medical attention two weeks after symptoms began.</p> <p>Other (Includes biological controls, plant growth regulators, antibiotics, etc.): Gibberellin A4 mixt. with Gibberellin A7</p> <p>1 Possible Severity: Low/Mild</p>
080213	09/17/2008	<p>A 55 y/o female experienced eye irritation when she got some bug spray in her eye. She said she was going to the ER at WPC recommendation. Unable to complete interview. Could not locate medical record at hospital she said she was going to visit.</p> <p>Insecticide (excluding solely IGR and fumigants): Limonene</p> <p>1 Possible Severity: Low/Mild</p>
080214	09/19/2008	<p>A 52 y/o male activated six foggers throughout his 2,200 square foot home. As he finished activating the last bug bomb he suddenly was unable to breath and coughed uncontrollably. He phoned 911 before falling out the kitchen door, where he was found and responded to oxygen treatment. He was admitted to the hospital to follow respiratory symptoms and was released the next day.</p> <p>Insecticide (excluding solely IGR and fumigants): Cypermethrin (ANSI); Tetramethrin (ANSI)</p> <p>1 Definite Severity: Moderate</p>
080215	09/21/2008	<p>A 54 y/o female tripped over an insecticide fogger, fell and it discharged in her face and eyes. She was seen at the emergency room. No follow up interview by DOH.</p> <p>1 Probable Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080217	08/11/2008	A 23 y/o male dairy worker developed dermal symptoms after being exposed to an insecticide from an auto-dispenser in the milking room, used to control flies. He sought medical care two days later. Insecticide (excluding solely IGR and fumigants): Pyrethrins; Piperonyl butoxide 1 Probable Severity: Low/Mild
080218	09/03/2008	A 44y/o correctional worker developed respiratory symptoms after he was exposed to an insecticide while spraying some bees in the prison warehouse. The spray came down on his face, neck and back. He washed after the exposure and even changed his shirt. He started to have chest tightness one half hour later. He sought medical care the same day. Insecticide (excluding solely IGR and fumigants): Tetramethrin (ANSI); Phenothrin, D- 1 Probable Severity: Low/Mild
080219	09/09/2008	A 25 y/o male applicator spraying apples developed neurological and gastrointestinal symptoms while spraying an organophosphate insecticide. He was wearing complete PPE and still felt the spray on his forehead. He sought medical treatment one day later. Work restrictions pended on cholinesterase results as requested by the health care provider. Insecticide (excluding solely IGR and fumigants): Azinphos-Methyl 1 Possible Severity: Low/Mild
080221	09/28/2008	A 56 y/o female poured pesticide around shrub base per instructions, then hurried at the end of the application and splashed product in her eye. She sought health care the same day. Insecticide (excluding solely IGR and fumigants): Imidacloprid 1 Definite Severity: Low/Mild
080226	09/29/2008	A 70 y/o male home owner had an ocular exposure to an insecticide with mild symptoms while he was spraying for yellow jackets. He was not wearing eye protection, and label did not require it. He sought medical attention the next day. Insecticide (excluding solely IGR and fumigants): Lambda-cyhalothrin; Prallethrin 1 Definite Severity: Low/Mild
080227	10/01/2008	A 53 y/o female accidentally washed her eyes with her dog's ear mite product. It is packaged in a bottle similar to eye wash product. She sought medical treatment for her eye symptoms and suffered no permanent damage. Unknown: Piperonyl butoxide, Pyrethrins 1 Definite Severity: Low/Mild
080229	10/04/2008	A 48 y/o male developed respiratory and eye irritation after applying a granular herbicide to his yard. Symptoms began ten hours later and he sought medical care the next day. He reported he made the application in windy conditions and thought he got some of the herbicide in his mouth, nose and eyes. Herbicide/algicide: Dichlobenil (ANSI) 1 Possible Severity: Low/Mild
080230	10/07/2008	A 29 y/o construction worker developed neurological, respiratory and gastrointestinal symptoms as he treated wood. He noticed fumes from the wood preservative permeated his charcoal mask. The mask was not sealed properly. He left work and went to the ER. Unknown: Copper naphthenate 1 Possible Severity: Low/Mild



<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080231	10/06/2008	<p>A 23 y/o female accountant was accidentally sprayed in the face with an aerosol can of wasp and scorpion killer that had been left on the cubicle next to hers. She inhaled deeply as she gasped in surprise by the spray. She went outdoors coughing, but felt progressively worse with nausea and was taken to the ER. She has had respiratory problems since the exposure.</p> <p>Insecticide (excluding solely IGR and fumigants): Tetramethrin (ANSI); Phenothrin, D-1 Probable Severity: Low/Mild</p>
080233	10/01/2008	<p>A 54 y/o male Fish and Wildlife employee accidentally stepped on a log on top of plastic herbicide spray bottle in back of truck. That caused the ejection of the pesticide up and onto his forehead and eye. He had ocular symptoms, washed his eye for 15 minutes and went to health care provider. Symptoms dissipated after medical visit.</p> <p>Herbicide/algicide: Triclopyr 1 Definite Severity: Low/Mild</p>
080234	09/29/2008	<p>A 55 y/o male and a 69 y/o female, both social workers at a residential facility for adults, worked in their offices, which are within the same room. The weather was warm so the windows were open as was the door to the outside. A tractor rig sprayed the grounds next to the windows. The herbicide drifted into the classroom indoor air and they developed headache, nausea, and irritant health effects throughout the rest of the day. The worker closed to the windows sought medical attention. There was no notification of the spraying, nor any signage. School administrators identified the herbicide sprayed when asked. Upon investigation by WSDA, the grounds revealed damage from a different herbicidal class, which was later admitted to have been left in the tank to which the other herbicide was added. WSDA issued a notice of correction for not posting landscape applications and for keeping inadequate pesticide application records. The maintenance staff provided inaccurate information regarding the pesticides applied next to open window and doors; this could have very dangerous effects, especially for persons that become ill because treatment is so closely associated with correct pesticide identification.</p> <p>Herbicide/algicide: Glyphosate, isopropylamine salt, Butoxyethyl 2,4-dichlorophenoxyacetate; Butoxyethyl triclopyr 2 Probable Severity: (2) Low/Mild</p>
080236	10/17/2008	<p>On Friday, October 17, a strong odor consistent with fumigant vapors was reported in a residential area adjacent to a treated field. DOH was able to collect information on 16 of the 19 people who lived there. The 16 people included five children aged 17 days to six years old, four children aged 12-18 years old, and seven individuals aged 19-65 years old. All 16 reported eye irritation. Tearing, headache, nausea, abdominal cramping, coughing, shortness of breath, and burning in the nose and throat were also reported. Twelve of the 16 sought health care for symptoms. In addition, two visitors and an emergency responder reported exposure and irritant symptoms but did not seek health care. This incident occurred during application of a soil fumigant, through the central pivot irrigation system, on a 150 acre crop circle across the road. It appeared that temperature inversion on the afternoon of October 17 contributed to the off-site movement of vapors into the nearby homes. Strong smell in the residential area also coincided with the pivot passing the affected houses. The residents did not see any posted sign or receive notification that the adjacent field was being fumigated. Residents called the police and both the Sherriff's office and fire department responded. Emergency responders did not shut down the application or notify WSDA of the case incident. WSDA and DOH learned about the incident Monday, October 20 and began immediate co-investigation. WSDA sampling found positive environmental evidence that the fumigant had moved off-site.</p> <p>Fumigant: Metam-sodium 3 Definite Severity: (2) Low/Mild Severity: Moderate 16 Probable Severity: (15) Low/Mild Severity: Moderate</p>
080237	10/19/2008	<p>A 56 y/o male splashed moss out in his eye when he dropped the product container on the ground as he was connecting it to the hose. He was wearing his regular eye glasses. He immediately flushed his eyes with the hose, then again indoors before being taken to the ER.</p> <p>Herbicide/algicide: Ferric sulfate 1 Definite Severity: Low/Mild</p>

Case	Exp Date	Incident Description
080238	07/15/2008	<p>Four neighboring households complained of strong petroleum smell and three adults reported respiratory and other symptoms after a home owner applied an herbicide to a small yard. No health care was sought. WSDA investigated and found evidence of herbicide movement into the storm drain. WSDA identified multiple other infractions. Fire department involved in initial response to rule out gas leak.</p> <p>Herbicide/algicide: Prometon (ANSI)</p> <p>3 Probable Severity: (3) Low/Mild</p> <p>1 Possible Severity: Low/Mild</p> <p>1 Asymptomatic severity:</p>
080241	10/01/2008	<p>A 28 y/o male irrigation district employee was sprayed with herbicides while assisting the applicator. He did not wash immediately and developed gastrointestinal and dermal symptoms one half hour after exposure. He sought medical attention the same day.</p> <p>Herbicide/algicide: Diuron (ANSI), Imazapyr, isopropylamine salt</p> <p>1 Possible Severity: Low/Mild</p>
080243	10/27/2008	<p>Three children ages 13, 12, and 9 experienced respiratory and gastrointestinal symptoms after release of a fogger in basement of their home. The three children were upstairs in the home when an uncle released the fogger in the basement. Symptoms began within one hour of the release. One child began use of her inhaler within the hour post exposure and continued to have wheezing when seen by HCP two days later. The other two children's symptoms had resolved by the time they were seen by HCP.</p> <p>Insecticide (excluding solely IGR and fumigants): Pyrethrins; Piperonyl butoxide; Methoprene, S-; N-octylbicycloheptene dicarboximide</p> <p>3 Possible Severity: (3) Low/Mild</p>
080244	10/17/2008	<p>A 51 y/o male employee of a large retail chain was splashed in the eye with herbicide by a co-worker as she tried to take off the cap. He is the manager of the garden department, and was preparing to dispose of the product which had been returned by a customer. Immediately after the splash occurred he felt ocular symptoms, after a couple hours he began to have neurological symptoms. He rinsed his eye out for about 20 minutes on-site, prior to going to a doctor. Symptoms lasted about two days.</p> <p>Herbicide/algicide: Glyphosate, isopropylamine salt; Dithiopyr</p> <p>1 Definite Severity: Low/Mild</p>
080245	10/28/2008	<p>A 27 y/o male orchard herbicide applicator developed ocular symptoms after he was hit with an undetermined amount of herbicide. He indicated he was applying by using a boom sprayer located in front of the tractor when a branch hit the boom arm lifting it and spraying his face. The mist came in under his safety glasses. He developed burning sensation. He washed his face and eyes for ten minutes. He was taken by his supervisor to the clinic the same day.</p> <p>Herbicide/algicide: Chloro-4,6-bis(ethylamino)-s-triazine, 2-, Diethanolamine (2,4-dichlorophenoxy)acetate; 2,4-D, Dimethylamine Salt</p> <p>Unknown: Glyphosate, isopropylamine salt</p> <p>1 Definite Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080246	10/27/2008	<p>Three residents (ages 50, 49, and 24) living adjacent to a crop circle, complained of eye, respiratory and/or gastrointestinal symptoms when the circle was fumigated. The fumigant was applied through a central pivot irrigation system prior to planting potatoes. Initial report of a strong odor coming from the field corresponded with inversion weather conditions and the irrigation pivot passing close to the house. The home was located in an area of intensive application which may have contributed to reported pungent odor for three days and symptoms. Eight fields, located 1.25 miles or less from their home, were treated with either metam sodium or metam potassium during the five day period. One resident sought medical care on the fifth day for symptoms that developed after working in her garden for two hours. Garden was one half mile downwind of two ongoing applications of metam sodium. WSDA co-investigated and found positive evidence of drift on the residential property.</p> <p>Fumigant: Metam-sodium, Potassium N-methyldithiocarbamate</p> <p>2 Probable Severity: (2) Low/Mild</p> <p>1 Insufficient Information</p>
080248	10/30/2008	<p>A 59 y/o male was applying moss control product to the roof of his home. He reports wind blowing product back at him over the hour or so he was applying. He wore safety goggles and gloves. Approximately one hour after finishing, he experienced respiratory and neurological symptoms. Two days after exposure, his wife contacted WPC and thought advised to seek healthy care, he did not. He reports that the most intense symptoms had receded three days after exposure, though respiratory symptoms lingered after four days, when contacted by DOH. He states he is getting better and that since his long-term primary care physician retired last month, he does not wish to seek health care.</p> <p>Herbicide/algicide: Zinc Sulfate</p> <p>1 Possible Severity: Low/Mild</p>
080252	10/14/2008	<p>A 48 y/o female developed neurological and gastrointestinal symptoms and went to the ER. She had been using multiple products over several weeks for scabies</p> <p>Unknown: Pyrethrins</p> <p>1 Probable Severity: Low/Mild</p>
080254	11/13/2008	<p>A 4 y/o male was treated with lice shampoo and the next morning he woke up with red crusty eyes. He was taken to clinic for medical treatment.</p> <p>Unknown: Piperonyl butoxide, Pyrethrins</p> <p>1 Definite Severity: Low/Mild</p>
080255	11/16/2008	<p>A 61 y/o female home owner was exposed to a granular moss control product when the container accidentally opened up as she handed it off to another individual for application. She developed ocular symptoms and metallic taste after the granules hit her face. She showered and rinsed her eyes. EMS was summoned by her daughter and they continued to rinse her eyes. She refused further medical care.</p> <p>Herbicide/algicide: Zinc Sulfate</p> <p>1 Probable Severity: Low/Mild</p>
080257	11/12/2008	<p>A 17 y/o male applied permethrin cream product to skin (legs, torso, and arms) for scabies. Packaging specifies to apply once for 8-14 hours, he uses it over seven consecutive days. He began experiencing neurological symptoms on day four, then some respiratory symptoms on day five. On day seven he awoke with tongue swelling and his mother contacted their clinic. Symptoms resolved ten hours later and did not return.</p> <p>Unknown: Permethrin, mixed cis,trans (ANSI)</p> <p>1 Possible Severity: Low/Mild</p>
080259	09/30/2008	<p>A 46 y/o male mechanic was drenched with a solution that contained a fungicide used for treatment of pears in a fruit packing house. He was accidently sprayed in the face while the tank was being drained. He developed ocular and neurological symptoms. He sought medical treatment five hours later.</p> <p>Fungicide: Sodium o-phenylphenate</p> <p>1 Probable Severity: Low/Mild</p>

<b>Case</b>	<b>Exp Date</b>	<b>Incident Description</b>
080261	12/17/2008	A 16 m/o male sprayed himself with mosquito repellent he found in bedroom and developed a rash. He was taken to the emergency department with mild symptoms, examined, and released. Insect repellent: Diethyl-meta-toluamide and other isomers, N,N-1 Definite Severity: Low/Mild
080262	12/22/2008	A 23 m/o female ingested small amount of flea insecticide for dogs. She promptly vomited four times and was seen at the fire department. Child was fine after that. Unknown: Imidacloprid 1 Possible Severity: Low/Mild
080263	10/11/2008	A 37 y/o male soil fumigant applicator attempted to open a plugged fumigation line connected to deep shank injection system. When he disconnected the line, fumigant hit his clothing and hands. He took his clothes off and washed, but he still developed coughing and burning eyes and lips. He sought medical treatment at hospital the same day. Fumigant: Dichloropropene, 1,3-, Chloropicrin 1 Probable Severity: Low/Mild
080264	12/21/2008	A 25 y/o male and a 37 y/o male both residents of a ten room boarding house, developed respiratory and neurologic health effects after indoor exposure to a bug bomb set off in another tenant's room. Insecticide (excluding solely IGR and fumigants): Pyrethrins; Octyl bicycloheptene dicarboximide, N-; Permethrin, mixed cis,trans (ANSI) 1 Probable Severity: Moderate 1 Possible Severity: Low/Mild
090013	10/27/2008	A 58 y/o male re-entered his duplex one hour after activating three bug bombs. He tried to hold his breath during his short time inside but failed and inhaled the spray. He had immediate eye and gastrointestinal symptoms. He did not seek health care and symptoms were resolved later that day. DOH provided IPM information for ant-control and medical information for his doctor. Insecticide (excluding solely IGR and fumigants): Cypermethrin (ANSI); Tetramethrin (ANSI) 1 Possible Severity: Low/Mild

Washington State Department of Labor and Industries, Summary of Pesticide Inspections, 2008

County, County inspection # region	Pesticides Involved	#of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspection
County 549	Fumotoxin Azinphosmethyl	18	Applying Pesticides	WSDA			6/30/2008 7/23/2008	<p><b>Repeat Serious:</b> No written respiratory protection program: \$6300.00 No medical evaluation for respirator users: \$4500.00 No records for kept: \$900.00</p> <p><b>Serious:</b> Pesticide were not used as directed by the label and a minor was allowed to apply a restricted use pesticide: \$3150.00 No training for hazardous chemicals: penalty combined with previous citation. No procedures for respirator fit testing: \$450.00 Employees were not provided with appropriate respirators: \$3150.00</p> <p><b>General Citation:</b> Incomplete chemical inventory: \$0.00</p>	Referral

County, County Inspection # region	Pesticides Involved	# of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspection
								Employer did not provide specific information about applications in the same location specified by the safety poster: \$0.00  <b>Total Assessed Penalties \$18450.00</b>	
Over county 527	Herbicides Round up	44	Applying herbicides				4/22/2008 7/1/2008	<b>Serious Citation</b> No MSDS: \$1000.00 No training on hazardous chemicals: \$1000.00 Employer did not ensure that portable or plumbed eyewashes were accessible: \$200.00 no PPE for eyes an face: \$1000.00  <b>General Citation:</b> No medical exam for respirators: \$0.00 No information provide to employees who were voluntarily using respirators: \$0.00 No labeling on secondary containers of pesticides: \$0.00  <b>Total Assessed</b>	Referral

City, County Inspection # region	Pesticides Involved	#of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspect
								<b>Penalties \$3200</b>	
County 150	Mycosshield Tri-foi		Mixing, loading, applying				5/13/2008 5/16/2008	<b>Serious Citation:</b> No emergency eyewash: \$320.00  <b>Total Assessed Penalties \$320.00</b>	Planned
City County 223	Lorsban 4E	75	Applying pesticide				7/14/2008 7/18/2008	<b>Serious:</b> Employer did not establish a Cholinesterase medical monitoring program: \$150.00 Employer did not make medical monitoring available required by the Cholinesterase program: \$150.00  <b>General:</b> No written hazard communication program: \$0.00 No written respiratory program: \$0.00 No record keeping for respirator users:\$0.00  <b>Total Assessed Penalties \$300.00</b>	Planned

County, County Inspection # region	Pesticides Involved	#of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspection
County 295	BSP Lime-Sulfur solution	25	Mixing, loading, applying				5/30/2008	<b>Serious Citation:</b> No emergency eyewash: \$200.00  <b>General Citations:</b> No decontamination area for PPE: \$0.00  <b>Total Assessed Penalties \$200.00</b>	Planned
							6/2/2008		
County 713	Azinphos Methyl	15	During mixing and loading				6/3/2008	<b>Serious Citation:</b> Employer did not provide A portable or plumbed eyewash: \$100.00  <b>Total Assessed Penalties \$100.00</b>	Planned
							6/3/2008		
County 445	Guthion 50 WSP	45	Applying pesticides				8/8/2008	<b>Serious Citation:</b> No plumbed or portable emergency eyewash: \$100.00  <b>Penalties Assessed \$100.00</b>	Planned
							8/12/2008		
County 162		9	Mixing and Loading				5/27/2008	<b>Serious:</b> No emergency eyewash: \$100.00  <b>Total Assessed Penalties \$100.00</b>	Planned
							5/30/2008		



County, County Inspection # region	Pesticides Involved	#of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspection
San Diego County 0761		80	Spraying pesticides				8/6/2008 8/12/2008	<b>General Citation:</b> No place for employees to decon their PPE: \$0.00 No chemical list: \$0.00  <b>Total Assessed Penalties \$0.00</b>	Planned
San Diego County 096	Pesticides	30					6/16/2008 6/16/2008	<b>General Citation</b> No written respirator program:\$0.00 No medical evaluations for respirator user: \$0.00  <b>Total Assessed Penalties \$0.00</b>	Planned
San Diego County 0770	Pesticide	25					6/18/2008 6/18/2008	<b>General Citation:</b> No written hazard communication program: \$0.00 No Material Safety Data Sheets: \$0.00 No chemical inventory: \$0.00 No PPE assessments: \$0.00 No written respirator program : \$0.00  <b>Total Assessed Penalties</b>	Planned

County, County Inspection # region	Pesticides Involved	# of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspection
County 140	Guthion 50 WSP	27	Applying pesticides				8/8/2008 8/12/2008	<b>\$0.00</b> <b>General Citation:</b> No change out schedule for respirator users: \$0.00 No medical evaluations for respirator user \$0.00 No pesticide record keeping:\$0.00 No pesticide safety poster:\$0.00 No place for employees to decon their PPE: \$0.00 No written hazard communication program: \$0.00 No pesticide warning posting:\$0.00 <b>Total Assessed Penalties \$0.00</b>	Planned
County 797		4	Mixing, loading and applying pesticides				6/26/2008 7/2/2008	<b>General Citation:</b> No written respirator program: \$0.00 No respirator program records :\$0.00 No medical evaluation for respirator use: \$0.00 <b>Total Assessed Penalties</b>	Planned

City, County inspection # region	Pesticides Involved	#of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspection
County 288	Yuma 4E Intrepid 2F Rubigan EC Fungicide Dithane M45 Kocide 3000	35	Mixing, loading, applying				5/8/2008 5/8/2008	<p><b>\$0.00</b></p> <p><b>General:</b> No hand towels or soap in mixing area: \$0.00 Employer did not provide a site for employee decontamination: \$0.00 No respirator change out schedule: \$0.00 No place for employees to wash their PPE before use: \$0.00</p> <p><b>Total Assessed Penalties \$0.00</b></p>	Planned
City County 280		6	Thinning Applying pesticides				5/7/2008 5/7/2008	<p><b>General:</b> No written hazard communication program \$0.00 Pesticide record no readily accessible: \$0.00 No written respiratory program: \$0.00 No medical evaluation for respirator users: \$0.00 No respirator fit-test procedures:\$0.00</p> <p><b>Total Assessed Penalties</b></p>	Planned

City, County inspection # region	Pesticides Involved	#of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspection
County 288		15	Apply pesticides				8/18/2008 8/28/2008	<b>\$0.00</b> <b>General:</b> No written hazard communication program \$0.00  <b>Total Assessed Penalties \$0.00</b>	Referral
City County 771		16	Applying pesticides working in areas of with pesticide applications				6/30/2008 6/30/2008	<b>General:</b> No pesticide application information posted: \$0.00 No written hazard communication program \$0.00 No written respiratory program: \$0.00 No record keeping for respirator users:\$0.00 No medical evaluation for respirator users: \$0.00 No fit testing for respirators: \$0.00  <b>Total Assessed Penalties \$0.00</b>	Planned
County 164	Guthion	5	Mixing and load Applying pesticides				6/12/2008 6/12/2008	<b>General Citations</b> No pesticide safety poster: \$0.00 No chemical inventory:	Planned

County, County inspection # region	Pesticides Involved	# of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspection
								\$0.00 No fit testing for respirator users:\$0.00  <b>Total Assessed Penalties \$0.00</b>	
County 004	Organophosphate N-Methyl-Carbamate	80	Transferring pesticide				7/14/2008 7/14/2008	<b>General Citations</b> No water for routine washing: \$0.00 Employer did not provide single use towels: \$0.00 Employer did not pay for transportation cost for employees to have cholinesterase testing performed: \$0.00 Respirators no stored correctly: \$0.00 No training on MSDSs location and how to use the MSDS: \$0.00 No medical evaluation for respirator users: \$0.00 Improper transfer of pesticides from one container to another \$0.00 No annual fit test: \$0.00  <b>Total Assessed Penalties</b>	Planned

County, County inspection # region	Pesticides Involved	# of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspection
Yuma County 094	Yuma 4E Micronized Wettable Sulfur	35	Mixing, loading, applying				5/20/2008 6/4/2008	<b>\$0.00</b> <b>General Citation:</b> No emergency eyewash: \$0.00 No decontamination area: \$0.00 No area for employees to wash thoroughly after spraying or during an emergency: \$0.00 Pesticide records were not readily accessible to the employees: \$0.00 No written respiratory program: \$0.00 No training or information as required by Hazardous Communication Program: \$0.00 <b>Total Assessed Penalties \$0.00</b>	Planned
New River County 124	Iorsban	6	Mixing and spraying				6/2/2008 6/2/2008	<b>General:</b> No program administrator for The Respiratory Protection Program: \$0.00 Employer did not ensure respirators were maintained in a clean	Planned

County, County Inspection # region	Pesticides Involved	#of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspection
								and reliable condition: \$0.00  <b>Total Assessed Penalties \$0.00</b>	
San Diego County 315	Diacon-D	6	Placing pesticide				10/22/2008 10/22/2008	<b>General:</b> No MSDS: \$0.00 No documentation of safety meetings: \$0.00  <b>Total Assessed Penalties \$0.00</b>	Planned
San Diego County 296	Round-up	1	Applying pesticides				6/18/2008 6/18/2008	<b>General:</b> No written Haz Com program: \$0.00 MSDSs were not readily accessible: \$0.00 No written respiratory program: \$0.00 No record keeping for respirator users:\$0.00 No medical evaluation for respirator users: \$0.00 Respirators were not stored properly: \$0.00  <b>Total Assessed Penalties</b>	Planned

County, County # Inspection # region	Pesticides Involved	#of Employees	How exposed	Other agencies involved	Incident date	Compliant date	Inspection date (opened) (closed)	Citations/costs	Type of inspection
County #809	Guthion Sevin Gramoxone	3					4/8/2008 4/8/2008	<b>\$0.00</b> <b>General:</b> No written Haz Com program: \$0.00 No written respiratory program: \$0.00 Respirators where not stored correctly: \$0.00 Haz Com training: \$0.00  <b>Total Assessed            Penalties            \$0.00</b>	Planned
County #136		5					5/29/2008 5/29/2008	<b>General:</b> No eyewash: \$0.00 No APP: \$0.00  <b>Total Assessed            Penalties            \$0.00</b>	Planned



# APPENDIX D

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## License Types and Enforcement Definitions

Department of Agriculture, Pesticide License Types

Department of Agriculture, Enforcement Action Definitions



## Washington State Department of Agriculture, Pesticide License Types

<b>Commercial Applicator</b>	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.
<b>Commercial Operator</b>	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.
<b>Commercial Pest Control Consultant*</b>	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.
<b>Dealer Manager*</b>	A person who supervises the distribution of pesticides (other than home and garden products) from a licensed pesticide dealer outlet.
<b>Private Applicator</b>	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.
<b>Private Commercial Applicator</b>	A person who applies or 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.
<b>Public Operator</b>	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.)
<b>Public Pest Control Consultant*</b>	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.
<b>Demonstration and Research Applicator</b>	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.
<b>Structural Pest Inspector</b>	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**

<b>No action indicated</b>	Not a pesticide complaint, or Not valid, or No violations noted, or No further action required.
<b>Technical assistance</b>	WSDA provided information only.
<b>Verbal Warning</b>	No evidence for further legal action but person was cautioned verbally by WSDA. No permanent record of warning.
<b>Advisory letter/Warning letter</b>	Some evidence of violation but not enough to take legal action. Person was warned to be more cautious.
<b>Notice of correction</b>	Notified that a minor violation must be corrected. Usually given thirty days. If corrected, no further action. If not corrected, further action is taken.
<b>Notice of Intent/Administrative action Legal case</b>	Usually results in a fine and/or license suspension for a varying interval.
<b>Referred</b>	Sent to another agency for action. The violation is not in WSDA jurisdiction.
<b>Stop sale</b>	Further sale of the product is prohibited until violation corrected. Generally an unregistered or damaged product.

# APPENDIX E

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## Department of Ecology Maps

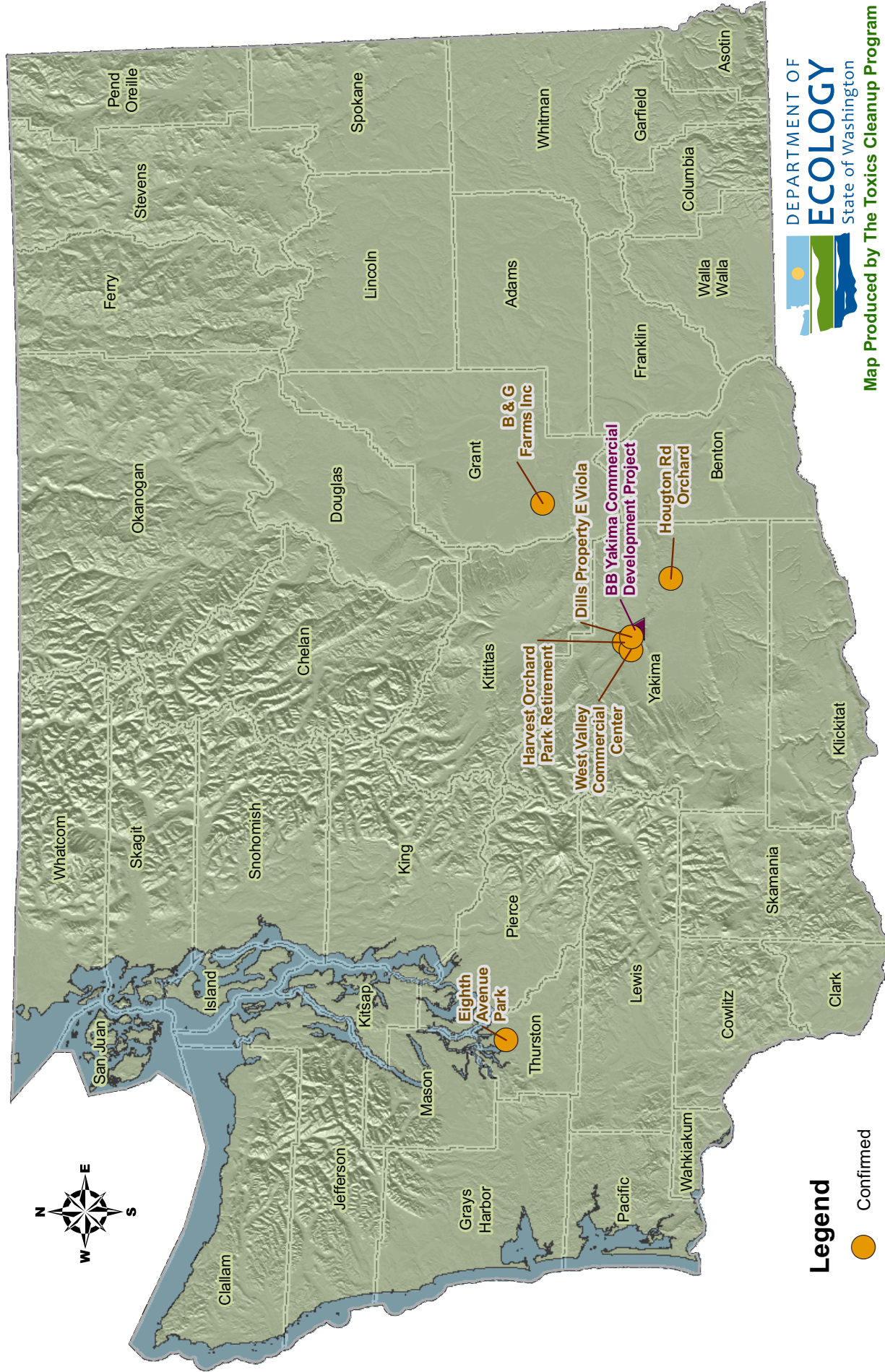
Pesticide Contaminated Sites Through 2008

Active Pesticide Contaminated Sites Through 2008

Pesticide Contaminated Sites Through 2008



# Pesticide Contaminated Sites (7) Added in 2008

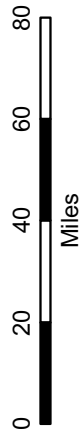


**Map Produced by The Toxics Cleanup Program**

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 July 2009. 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**

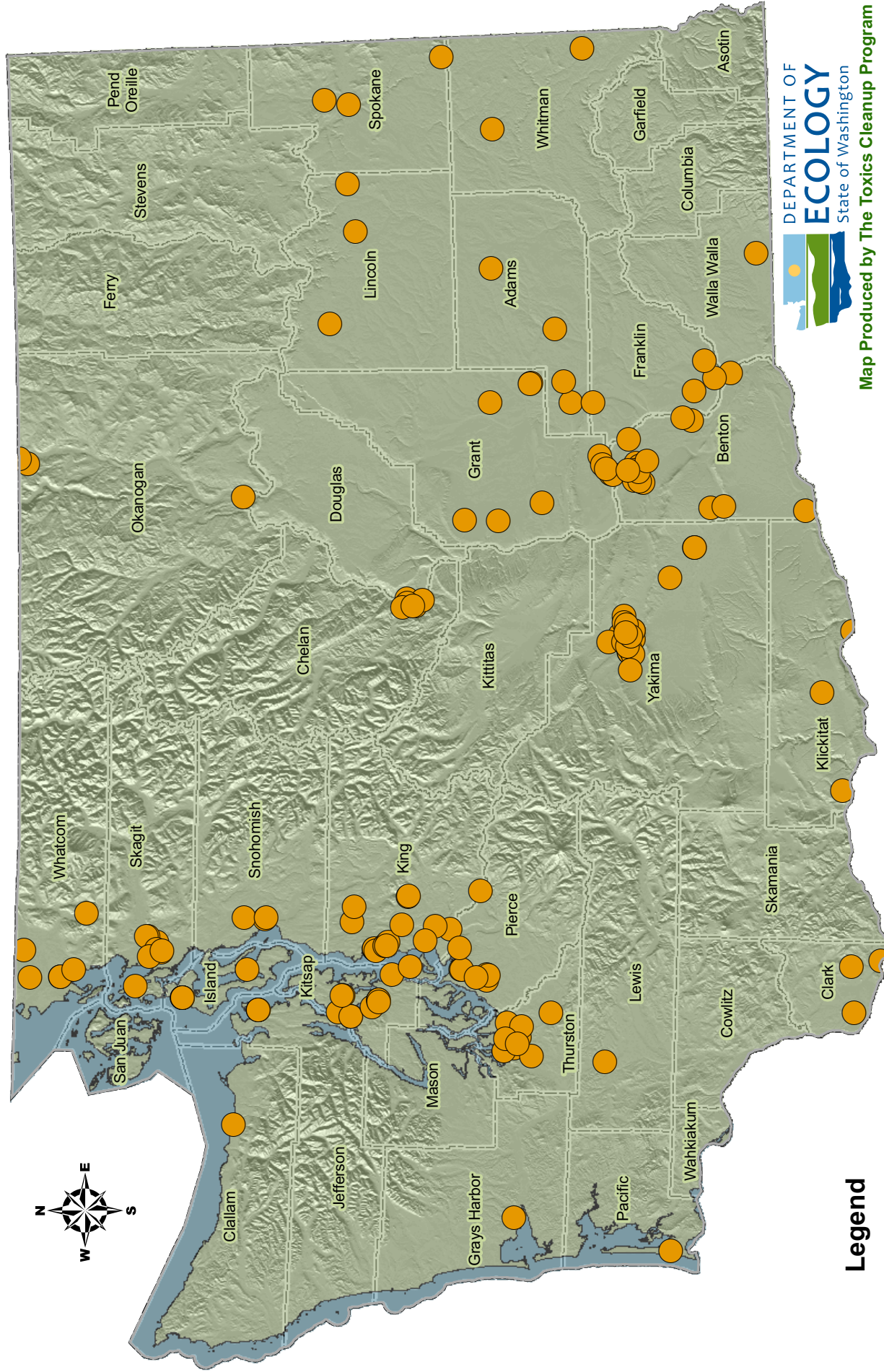
- Confirmed (Yellow circle)
- Remediated (Purple triangle)







# Active Pesticide Contaminated Sites (156) Through 2008



## Legend

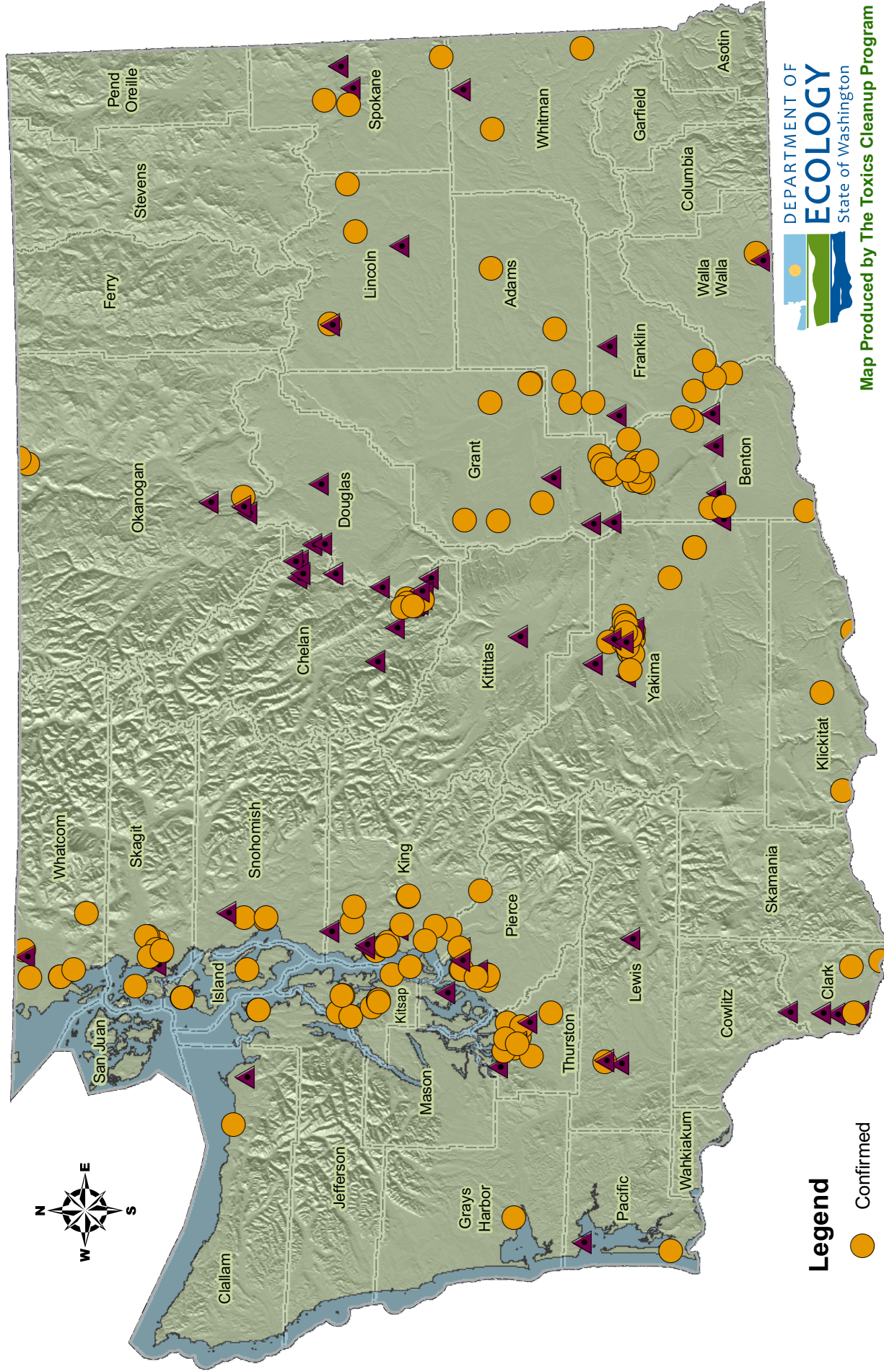
- Confirmed

**Map Produced by The Toxics Cleanup Program**

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 July 2009. 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.



# Pesticide Contaminated Sites (233) Through 2008



**Map Produced by The Toxics Cleanup Program**

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 July 2009. 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.

