



STATE OF WASHINGTON
DEPARTMENT OF AGRICULTURE
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January 8, 2018

To: Members of the Washington State Legislature
From: Derek I. Sandison, Director
Re: Pesticide Management Division 2017 report to the Legislature

At the Washington State Department of Agriculture, we take seriously our role as the agency responsible for regulating pesticides in our state. Our body of work includes properly registering pesticides for use in our state, ensuring pesticide applicators are properly licensed, working to provide training for farmworkers involved in agricultural applications, investigating complaints of pesticide misuse and providing for the safe disposal of unwanted pesticide product.

Much of this work is reflected in the attached *2017 WSDA Pesticide Management Division Annual Report to the Legislature*. I'm pleased to submit this report of our ongoing work.

In the 2017 Fiscal Year, as part of a continuing emphasis on prioritizing public and environmental health, WSDA trained more than 2,800 pesticide handlers and farmworkers at 34 separate events statewide. In addition, the agency offered training at annual re-certification grower meetings. The last meeting of the horticulture industry drew more than 900 participants for Spanish-language pesticide training workshops, the largest attendance we have ever had for such an event.

In response to this overwhelming interest, we are significantly increasing training opportunities. Our current training season runs from November 2017 through April 2018, when grower and worker availability is the highest. We have already scheduled at least two training workshops weekly during the season.

We are also expanding our bilingual Private Applicator pre-license, Hands-on Pesticide Handler Training, and Train-the-Trainer courses in response to requests from industry and farmworker stakeholders. These programs will now include updates on Worker Protection Standards and on-site training on Airblast Sprayer Calibration and Best Management Practices, which includes management of off-target pesticide drift in orchards, vineyards and hops fields.

In the coming year, WSDA is committed to continuing to provide instructive training opportunities and fair and consistent regulatory oversight. The department is also committed to effectively responding to the needs of all our industry stakeholders, including farmworkers, growers and pesticide applicators.

Our goal is to fulfill our obligation to protect human health and the environment while ensuring the effective, safe and prudent use of pesticides

2017

WSDA Pesticide

Management Division

Annual Report to

the Legislature

*As Required by RCW 15.58.420
and RCW 17.21.350(1)*

February 2018

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This document fulfills annual reporting requirements under RCW 15.48.420 and RCW 17.21.350(1).

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Summary

The Washington State Department of Agriculture (WSDA) Pesticide Management Division (PMD) carries out multiple activities in an integrated approach to ensure the safe and legal use of pesticides in Washington State. In Fiscal Year 2017 (FY17):

Pesticide Registration and Licensing Services Program

- Registered or maintained registration of over 14,000 pesticides, including special local need registrations for specialty crops (e.g., hops, mint, raspberries) with particular pest problems for which there is not a federally registered pesticide available.
- Administered approximately 10,000 exams to license professional pesticide applicators, consultants, dealers and structural pest inspectors.
- Certified over 28,000 individuals (applicators, consultants, dealers) and issued 33,000 licenses (includes individuals with multiple licenses).

Pesticide Technical Services and Education Program

- Provided safety training to more than 2,800 farm workers and trainers
- Collected and disposed of 123,562 pounds of waste pesticides, reducing the risks to public health and the environment.

Pesticide Compliance Services Program

- Conducted 139 inspections to ensure that applicators, dealers, manufacturers and employers comply with state and federal pesticide laws, including 21 inspections at farms, orchards, forests and nurseries to ensure compliance with the Worker Protection Standard (WPS). Over half the 34 distinct WPS violations found concerned inadequate safety training or decontamination supplies.
- Conducted 161 investigations in response to complaints, agency referrals, investigator surveillance and other sources of information. Consistent with past years, herbicides (weed killers) dominated the investigations, with two herbicide active ingredients, glyphosate and 2,4-D, the most frequently involved. Herbicides are extensively used by commercial firms as well as the general public. Considering that more than 27,000 individuals are licensed to apply pesticides professionally and homeowner use of pesticides is widespread, the number of complaints received and investigated represents only a tiny fraction of the total applications made in the state.
- Of the 161 investigations:
 - About 43 percent found no violation or that the problem was not pesticide-related.
 - 137 (85 percent) related to possible pesticide application, storage, or disposal issues.
 - 22 (14 percent) related to licensing or distribution incidents, or to structural pest issues (may or may not have included pesticide application issues).
 - 94 investigations were in Eastern Washington; 67 in Western Washington.
 - 52 (32 percent) were agricultural investigations (farming, forestry, nurseries or greenhouses), with 40 of them in Eastern Washington and only 12 in Western Washington.
 - Drift investigations accounted for 79 percent of the 52 agricultural investigations. Only seven of those agricultural drift investigations found violations with impacts relating to human illness or symptoms.

1. Introduction

When used appropriately, pesticides are an important tool for protecting crops, buildings and natural resources from damage and for preventing the spread of disease, such as those carried by insects, rodents and other animals. However, pesticides also pose certain risks. To protect human health and the environment, the Washington State Department of Agriculture (WSDA) carries out a variety of activities to ensure the safe and legal distribution, use and disposal of pesticides in Washington.

WSDA's Pesticide Management Division (PMD) takes the approach that the most effective way to protect people and the environment from pesticide exposure is first through voluntary compliance with the laws and rules. PMD strives to accomplish this through effective outreach, hands-on assistance and routine inspections with those working to comply, backed up by thorough complaint investigation and enforcement actions as needed.

This report identifies key activities carried out by three WSDA Pesticide Management Division (PMD) programs in Fiscal Year 2017¹ (FY17):

- **Pesticide Registration and Licensing Services Program**
 - Registers pesticides and licenses pesticide applicators, dealers and consultants.
- **Pesticide Technical Services and Education Program**
 - Conducts farmworker education and training.
 - Oversees the pesticide waste identification and disposal program.
- **Pesticide Compliance Services Program**
 - Inspects marketplaces, importers, manufacturers, and pesticide application sites for compliance with state and federal requirements.
 - Investigates complaints related to possible pesticide misuse; improper storage, sales, and distribution; applicator licensing violations and building structure inspections for wood destroying organisms such as termites.
 - Maintains a registry of pesticide-sensitive individuals to be notified for commercial landscape and right-of-way applications.

Together these programs create an integrated approach to pesticide management under the authority of the [Washington Pesticide Control Act \(Chapter 15.58 RCW\)](#), the [Washington Pesticide Application Act \(Chapter 17.21 RCW\)](#), the [General Pesticide Rules \(WAC 16-228\)](#), the [Worker Protection Standard \(WAC 16-233\)](#) and a number of other [pesticide-specific regulations](#).

This document fulfills annual reporting requirements under the above-mentioned statutes.²

¹ Fiscal Year 2017 = July 1, 2016 – June 30, 2017

² RCW 17.21.350(2) requires reporting on the pesticide residue food monitoring program. WSDA has no such program, however FDA does. Reports can be found at:

<https://www.fda.gov/Food/FoodborneIllnessContaminants/Pesticides/ucm2006797.htm>

2. Pesticide Registration and Licensing Program

Safe pesticide use starts with the appropriate pesticide and the knowledge of how to use it properly and safely. Pesticides sold in Washington State must first be registered with WSDA (as per Chapter 15.58 RCW); and applicators, operators, consultants, dealers and commercial pesticide application equipment must be licensed. Structural pest inspectors must be certified as well.

Pesticide Registration

Under RCW 15.58.050, the Registration section maintains a registry of over 14,000 pesticide products. Registration is on a two-year cycle, so about half (7,000-8,000) are registered each year.

In FY 17, under RCW 15.58.405, the Registration section also:

- Issued 16 new Section 24c Special Local Need (SLN) registrations for specialty crops (e.g., hops, mint, raspberries) with particular pest problems for which there is not a federally registered pesticide available.
- Submitted four requests to the Environmental Protection Agency (EPA) for Section 18 Emergency Exemptions from registration when there is an urgent, emerging or atypical pest situation that will result in significant economic loss.
- Issued 23 Experimental Use Permits, which support research and development of new pesticides and uses.

Pesticide Licensing

Under Chapters 15.58 and 17.21 RCW, the Licensing section provides initial certification and continuing education for pesticide applicators, dealers, consultants and structural pest inspectors.

In FY17, PMD:

- Administered 10,407 exams to new potential licensees.
- Certified over 28,000 individuals (applicators, consultants, dealers).
- Issued over 33,000 licenses (includes individuals with multiple licenses).

PMD also accredits continuing education courses conducted by a variety of sponsors, and accredited 1,648 recertification sessions within 678 courses in FY17. A growing number of these sessions are provided in Spanish to serve the licensed Hispanic community.

3. Technical Services and Education Program

Pesticide safety goes beyond proper application of pesticides. The Technical Services and Education Program (TSEP) works to support public and environmental health through pesticide education and training (mostly farm-focused), and through the collection and disposal of unwanted pesticides. Supporting safer farmworkers and work environments also supports the success of Washington's agricultural businesses.

Pesticide Training

Farmworkers and pesticide handlers must be trained according to the Worker Protection Standards, WAC 16-233 (under RCW 17.21.440). The Farmworker Education Program provides pesticide safety training directly to over two thousand farmworkers. Employers and groups also train farmworkers through TSEP's Worker Protection Standard (WPS) Train-the-Trainer program.

The TSEP conducts standard training for:

- Farm Workers – pesticide safety
- Pesticide Handlers – safe pesticide handling, including hands-on training
- Trainers from farms and orchards – how to effectively deliver WPS-mandated pesticide safety training to their employees
- Trainers responsible for respirator programs – fit-testing, use, maintenance, recordkeeping
- Pesticide Licensing Training – preparation for pesticide licensing exam
- Pesticide Application Equipment Best Management Practices

The agricultural community's participation helps strengthen the training's effectiveness. For example, sponsors for Pesticide Application Equipment Best Management Practices workshops in FY 17 included Washington Fruit and Produce, G.S. Long (an agrochemical dealer), and Washington Winegrowers.

PMD Farmworker Education specialists also provide trainings requested by growers on such topics as properly using personal protective equipment, calibrating air blast sprayers, combating heat stress, and performing respirator fit tests. The training is conducted on site, is as interactive and hands-on as possible, and is specifically targeted to the needs of the farm. This training is often conducted following an inspection by PMD and assists growers to come into compliance with pesticide law.

Table 1 TSEP Training Totals - FY17

Training	Attendees	Events	Establishments represented
Hands-on Handler (Traditional and Hybrid)	2,027	15	374
Train-the-Trainer	305	11	141
Pre-license	178	5	80
Pesticide Application BMP's	123	3	41
Other Worker and Handler	180	3	3
TOTAL	2,813	37	639

NOTE: Totals may include individuals or establishments participating in more than one event.

Waste Pesticide Disposal

The PMD's Waste Pesticide Identification and Disposal Program³ collects unusable and unwanted agricultural- and commercial-grade pesticides from residents, farmers, small businesses, non-profits and public agencies without a direct customer charge. The goal is to collect and properly dispose of unused or unusable pesticide products to prevent human and animal exposure, prevent use of cancelled pesticides on crops, and to help eliminate the potential source of contamination to the environment.

Some of the risk comes from old pesticides stored in sheds or on abandoned properties. By holding collection events across the state and offering free, proper disposal, WSDA provides the incentive to clear out these dangers.

Over the past 29 years, WSDA has collected more than 3 million pounds of waste pesticides, including currently banned pesticides such as DDT and chlordane. Nearly all of the collected pesticides are destroyed via a thermal destruction process, thus reducing both the amount added to hazardous waste landfills and the associated liability.

In FY 17, PMD:

- Held 11 waste collection events across the state.
- Collected and properly disposed of 123,662 pounds of unwanted pesticides (an average of 524 pounds / customer).

³ Operated under RCW 15.58.045.

4. Pesticide Compliance Services Program

The Pesticide Compliance Services Program (Compliance) enforces state and federal pesticide laws and rules, and also enforces structural pest inspection rules. Compliance staff work out of five offices across the state: Moses Lake, Olympia, Spokane, Wenatchee and Yakima.

The primary Compliance activities are inspection and investigation. The program:

- Conducts inspections of pesticide applicators, dealers and producers.
- Conducts investigations of alleged misuse of pesticides.
- Reviews permit requests for pesticide applications in sensitive areas.
- Provides technical assistance to the regulated community and the public.

When an inspection or investigation finds violations, the program takes either informal action (Notice of Correction or NOC) or formal action (Notice of Intent or NOI) as appropriate. As part of regulatory reform, RCW 43.05.110 requires PMD to issue an NOC on all first-time violations unless the violation meets one of the following criteria. The violation:

- Has a probability of placing a person in danger of death or bodily harm.
- Has a probability of causing more than minor environmental harm.
- Has a probability of causing physical damage to the property of another in an amount exceeding \$1,000.
- Was committed by a business that employs 50 or more employees on at least one day in each of the preceding 12 months.

Some formal actions or NOIs include civil penalties (fines). As set by statute, the maximum civil penalty that PMD can assess for any single violation is \$7,500. To ensure that penalties are “fair and uniform” PMD is required to follow penalty matrix in rule, WAC 16-228-1130. For further explanation of the PMD’s penalty process and the rules that apply to penalties, see Appendix A.

Table 2. Overview of PMD Compliance Activity - FY17

	TOTAL	Resulting PMD Enforcement Actions		
		Total	NOC	NOI
Inspections	139*	76	75	1
Investigations	161**	65	56	9
Civil Penalties Assessed***	\$11,350			

* Includes 3 inspections done for EPA and not included in the enforcement columns. See Table3.

** Includes 28 marijuana investigations over which the Liquor and Cannabis Board has enforcement authority.

***Reflects final orders issued in FY17. Civil penalties assessed in FY2017 may not correlate to violations identified in FY2017. Actions that go through an administrative hearing often close out in the following fiscal year. See Appendix B.

Compliance investigations typically focus on pesticide use, while inspections typically cover not only use but also licensing, storage, registration and recordkeeping. Pesticide use is categorized as follows:

- **Agricultural Use** - farming, forestry, nurseries or greenhouses.
- **Non-Agricultural Use**
 - Commercial/industrial cases, such as in offices, apartments, homes, businesses or landscapes (majority in FY17 involved landscape applications).
 - Applications for structural pests or inspections for wood destroying organisms.
 - Residential pesticide applications by a homeowner, resident or neighbor.
 - Right-of-way applications made to locations including public and private roadways, electric lines, irrigation canal banks, etc.
 - Aquatic/riparian applications, generally for weed control.
 - School applications.
- **Marijuana** - Use of pesticides on marijuana.

4.1 INSPECTIONS

The Compliance program conducts inspections to:

- Monitor compliance with current laws and rules, including pesticide labels.
- Monitor compliance of previous enforcement actions.
- Identify problem areas and pursue compliance.
- Provide a visible field presence to encourage compliance and deter noncompliance.
- Collect evidence to document and support enforcement actions.

Though some inspections are “for cause,” such as a follow up to a prior inspection or investigation, most inspections are routine.

Table 3. Inspections Conducted and Enforcement Actions Issued – FY17

Inspection type	No. of inspections	Resulting PMD enforcement actions		
		Total	NOC	NOI
Agricultural Use	38	16	16	0
Non-Agricultural Use	15	7	7	0
Other				
Applicator Licensing/Records	20	16	16	0
Dealer Records	18	10	10	0
Market Place	24	15	15	0
Worker Protection Standards	21	12	11	1
Producer Establishment*	3	*	*	*
TOTAL	139	76	75	1

* Under a cooperative agreement, WSDA inspects producer establishments for the federal Environmental Protection Agency (EPA). Determination of violations and any related enforcement actions are done by EPA.

NOTE: Marijuana inspections are not included in the table because WSDA did not conduct inspections of marijuana grow operations, which are regulated by the Liquor and Cannabis Board (LCB).

Worker Protection Standard Inspections

A significant portion of PMD's compliance and outreach efforts are focused on ensuring compliance with the Worker Protection Standard (WPS). During FY17, PMD's compliance staff conducted 21 WPS inspections, almost all of them unannounced. While all types of agricultural establishments must comply with WPS, nearly half of the WPS inspections were at orchards (see Table 4, below), where a lot of hand labor and frequent pesticide applications occur.

Table 4. WPS Inspections by Site – FY17

Inspection Site	No. of WPS Inspections	Tier 1*	Tier 2*	Resulting PMD enforcement actions		
				Total	NOC	NOI
Orchards	9	9	-			
Row and Field Crops	6	5	1			
Nursery/Greenhouse	3	3	-			
Vineyards	2	1	1			
Combinations of Above	1	1	-			
TOTAL	21	19	2	12	11	1

*Tier 1 WPS inspections are conducted at the time an application is occurring or within 30 days of the last pesticide application. Tier 2 inspections are conducted at any other time.

Violations are incurred when the criteria for inspection elements have not been met. Over half of the WPS inspections found multiple violations—12 of the 21 sites inspected were responsible for 34 distinct violations (see Table 5, below). As a result, 11 NOCs and 1 NOI were issued. See also Appendix C.

Table 5. WPS Violations by Inspection Element – FY 17

Inspection Elements	No. of Violations
Decontamination Supplies	12
Pesticide Safety Training	7
Central Notice Posting	3
Personal Protective Equipment	3
Notice of Application	3
Label Information Provided	3
Mix/Loading, Applications and Equipment	2
Emergency Assistance	1
Entry Restrictions	0
Information Exchange	0
Total	34

NOTE: These WPS inspection elements are included on the Worker and Grower WPS Compliance Checklists, available online:
agr.wa.gov/PestFert/Pesticides/WorkerProtection.aspx#Resources.

4.2 INVESTIGATIONS

The investigation process is a systematic effort to thoroughly document the facts, collect evidence and determine if any violation(s) have occurred. PMD initiates investigations as the result of complaints, agency referrals, investigator surveillance and other sources of information. PMD works closely with other state and federal agencies and responds to stakeholder and citizen concerns.

By law, PMD is required to respond immediately to all complaints of human exposure and to respond to all other complaints within 48 hours.⁴

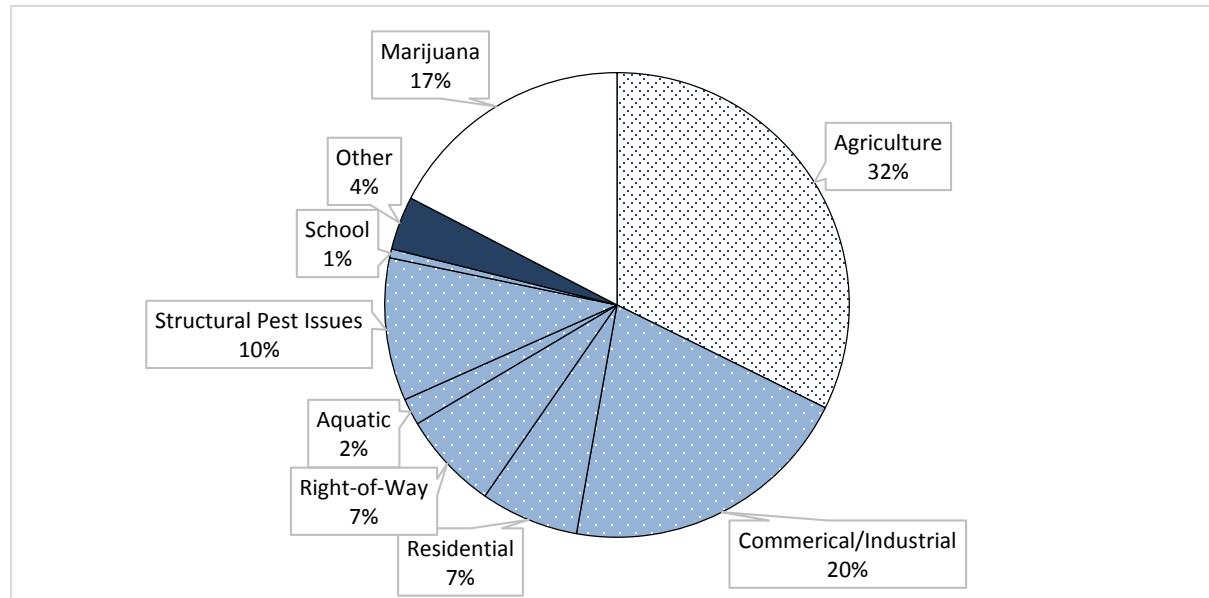
- PMD responded to all 47 human exposure complaints within 24 hours of receipt.
- Most of those responses (43) were on the same day the complaint was received.
- Of those cases⁵ that did not involve human exposure, all but three met the 48-hour response requirement.

During FY17 (July 1, 2016 - June 30, 2017), PMD conducted 161 investigations in a variety of settings, related to a variety of activities (see Figure 1 and Tables 6 and 11):

- 137 (85 %) related to possible⁶ pesticide application, storage, or disposal issues.
- 16 (10 %) related to structural pest issues (may or may not have included application issues).
- 6 (4%) related to licensing, or distribution incidents.
- 2 (1%) are still pending.

Considering that more than 27,000 individuals are licensed to apply pesticides (over 8,000 commercially) and homeowner use of pesticides is widespread, the number of complaints received and investigated represents only a tiny fraction of the total applications made in the state.

Figure 1. PMD Investigations by Type of Activity - FY17



⁴ RCW 17.21.190 and 17.21.340 require response to complaints; response times are specified in WAC 16-228-1040.

⁵ Does not include marijuana investigations, which must be arranged with the Liquor and Cannabis Board (LCB).

⁶ Upon investigation, not all complaints are confirmed to be pesticide-related.

TABLE 6 Overview of PMD Investigations – FY17

	TOTAL	Allegations* of drift	Other issues (non-drift)	Involving orchards	Non-orchard settings
Agricultural Investigations*	52	41	11	21 Includes 16 applications made by air-blast sprayer	31 Includes a diversity of cropping systems, application methods, and pesticide types.
Non-Agricultural Investigations*	75	23	52	na	na
Other (licensing, distribution)	6	0	6	na	na
Marijuana	28	0	28	na	na
TOTAL	161	64	97		

*Allegations only – reflects focus of investigation, not findings.

- Agricultural investigations focused largely on drift allegations, including several involving orchards, which may be intermixed with other crops, housing and heavily traveled roads. Investigation distribution has been consistent over the years and points to the need for greater education of applicators, particularly in regards to operation of air-blast sprayers and drift reduction techniques. Agricultural investigations included 19 allegations of human exposure.
- Non-agricultural investigations frequently included the failure to obtain the proper license type for the application, inadequate record keeping and the intentional or inadvertent spraying of another person's property. Non-Agricultural investigations included 26 allegations of human exposure.
- All marijuana investigations were conducted at the request of the LCB and initiated from allegations that unapproved pesticides were being applied to the marijuana crop.⁷ The main emphasis for PMD in these cases was to assist LCB with sampling of marijuana plants and product. Marijuana investigations included two allegations of human exposure.

⁷ With marijuana still prohibited at the federal level, the normal process for registering pesticides for use on the crop is not available. In 2013, PMD established criteria to determine which registered pesticides could legally be used on marijuana without violating either federal or state law. Products meeting the criteria are exempt from the requirement of a tolerance on food crops and have very generic labels that allow broad spectrum use on home gardens and non-specific food crops. None of the approved products specifically list marijuana as a crop on the label. The Washington State Liquor and Cannabis Board (LCB) maintains a list of these pesticide products that can be used on marijuana in Washington State. These products are minimum risk pesticides that are exempt under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) but regulated as pesticides by WSDA, or are certain organic pesticides.

Location of Investigations

There are significant differences in population dynamics, types of pest problems, and the nature of investigations between Eastern and Western Washington. Most investigations in Western Washington involved structural pest inspections, residential pesticide applications by a homeowner, resident or neighbor, intentional misuse, and unlicensed applicators. Most investigations from Eastern Washington involved agricultural applications, license issues, and drift. Eastern Washington staff conducted 27 more investigations than Western Washington staff (Table 7).

Table 7. PMD Investigations by County - FY17

Eastern WA Counties	No. of Investigations	Western WA Counties	No. of Investigations
Adams	3	Clallam	0
Asotin	0	Clark	5
Benton	4	Cowlitz	2
Chelan	9	Grays Harbor	2
Columbia	1	Island	2
Douglas	5	Jefferson	2
Ferry	1	King	14
Franklin	5	Kitsap	2
Garfield	0	Lewis	0
Grant	14	Mason	8
Kittitas	6	Pacific	1
Klickitat	3	Pierce	12
Lincoln	0	San Juan	1
Okanogan	5	Skagit	0
Pend Oreille	1	Skamania	0
Spokane	12	Snohomish	5
Stevens	2	Thurston	8
Walla Walla	8	Wahkiakum	1
Whitman	3	Whatcom	2
Yakima	12	W. WA Total	
E. WA Total	94		67
Combined WA Total - 161			

More agricultural investigations occur in Eastern Washington, whereas Western Washington investigates a much higher percentage on non-agricultural investigations (urban, homeowner, landscape applications, etc.). In fact, out of the 67 investigations in Western Washington, only 12 involved commercial agriculture.

As consistently seen every year, herbicides (weed killers) dominated the greatest number of investigations, with two herbicide active ingredients, glyphosate and 2,4-D, the most frequently involved. Herbicides are extensively used by commercial firms, as well as the general public.

Table 8. Investigations by Pesticide Type - FY17

Pesticide Type	Number of Investigations
Herbicides Only (weed killer)	60
Herbicides Combined w/Other Pesticide Types	6
Insecticides Only	30
Insecticides Combined w/Fungicides and Other Types	6
Fungicides	10
Fungicides Plus Others	4
Fumigants	4
Other Pesticide Types*	7

*Rodenticides, Moss Killer, Bactericide, Disinfectant, Moth Balls, Plant Growth Regulators, etc.

Overview of Investigative Findings

An investigation may find that there were violations or not. Sometimes an issue is found to not be pesticide-related at all. Even when violations **are** found, the severity of impact ranges widely.

Of the 133 investigations PMD conducted in FY17 that were **not** related to marijuana (i.e., agricultural, non-agricultural and other – see Table 11), the vast majority had no direct impact on human health:

- 60 (45%) - no violation found.
- 53 (40%) - no or minor adverse impacts, no human illness.
- 17 (13%) - human illness or significant environmental effects, no human deaths.
- 3 (2%) - not rated/pending.

“No violation found” includes cases for which there was insufficient evidence to prove a violation, the incident was not pesticide-related, or the complainant withdrew the complaint.

Drift

Rules for applying pesticides include requirements for taking measures to prevent drift. Drift is a concern because of potential adverse impacts on human health, crops, other plants, fish, livestock, and bees and other pollinators. During FY17, about 40 percent of all PMD investigations related to allegations of drift. Of these 64 pesticide drift allegations, 41 were in the agricultural sector and 23 were in the non-agricultural sector (see Table 6).

Of the 64 drift investigations:

- 27 (42%) - no violation found.
- 21 (33%) - no or minor adverse impacts, no human illness.
- 14 (22%) - human illness or significant environmental effects, no human deaths.
- 2 (3%) - not rated/pending.

Although there were 31 investigations of human exposure related to alleged drift, no violation was found in nearly half of them (14). However, 11 investigations were related to human exposure that resulted in symptoms or illness. See Table 9, below.

Table 9. Severity of Impact by Type of Drift Investigation – FY17

Drift Investigation Type (allegations)		No violation found	No or minor adverse impacts. No human illness.	Human illness or significant environmental effects. No human deaths.
Agricultural 41*	Human Exposure	7	5	7
	Crop or plant damage	4	4	3
	Other**	4	6	-
Non-Agricultural 23*	Human Exposure	7	1	4
	Crop or plant damage	3	2	-
	Other**	2	3	-
TOTAL	64	2 Unrated	27	21
				14

*Includes 1 unrated investigation not included in other columns.

** E.g., drift onto vehicles or other property.

Marijuana

All aspects of marijuana production, processing, and retail distribution in the state of Washington are regulated by the Washington State Liquor and Cannabis Board (LCB). The LCB maintains a list of the almost 350 pesticide products that can be used on marijuana in Washington State. Marijuana pesticide investigations are conducted at the request of the LCB, and the PMD assists the LCB with the sampling of marijuana plants and product. Any related enforcement actions are taken by the LCB.

As Table 10 shows, about two-thirds of the 28 marijuana investigations PMD assisted with in FY17 found evidence of the use of unapproved pesticides. LCB did take enforcement actions in a number of those cases, and PMD issued advisory letters for those same cases.

Table 10. Pesticide Use in Marijuana - FY17

TOTAL investigations	Cases w/ evidence of unapproved pesticide use	Cases w/no evidence of unapproved pesticide use
28	19	9

Enforcement

Of the 161 investigations PMD conducted in FY17, 133 were within its authority to issue corrective/enforcement actions for violations. (Marijuana violations are enforced by LCB). Almost half of those 133 investigations resulted in formal or informal actions. See Table 11, below. Two cases are currently open or under legal review.

Table 11. PMD Investigations and Actions by Type of Activity - FY17

Activity	No. of Investigations	No. Resulting in Actions
AGRICULTURAL	52	22
NON- AGRICULTURAL		
Commercial/Industrial	33	22
Residential (noncommercial)	11	0
Right of Way	11	6
Aquatic	3	2
Structural Pest Issues	16	10
School	1	1
OTHER (License/Distribution)	6	2
TOTAL	133	65

Table 12. PMD Corrective Actions as Result of Investigation - FY17.

Action Type	Actions Issued or Pending
Notice of Correction (NOC)	57
Notice of Intent (NOI)	9
Total	65

Note: Count represents the most stringent action issued for each case.

If corrections were not made in response to a NOC, and a NOI resulted, only the NOI is included here.

PMD posts information on NOI final orders online at agr.wa.gov/PestFert/enforcementactions.aspx. This site lists the parties involved, as well as the penalty (amount of civil penalty and/or license suspension). PMD does not post information related to NOCs.

5. Conclusion

WSDA's Pesticide Management programs (Registration and Licensing, Technical Services and Education, and Compliance) are working together to protect public and environmental health. Identifying trends can help WSDA best integrate these programs' efforts. For example, because compliance data shows pesticide drift was still the dominant issue in agricultural investigations in FY17, WSDA has increased and expanded farmworker training for FY18. WSDA is also working to identify opportunities to improve data tracking so as to better identify other trends that may need to be addressed in the future.

Appendix A

WSDA Penalty Process and Rules

How does WSDA determine the amount of penalty?

As set by statute, the maximum penalty that WSDA can assess for any single violation is \$7,500. To ensure that penalties are “fair and uniform” WSDA uses a penalty matrix in rule (WAC 16-228-1130). The matrix takes into account the seriousness of the violation, whether it is a first or a repeat offense, and whether there are any aggravating or mitigating factors involved. Larger penalties often reflect repeat offenses or multiple violations within the same incident.

If the violation involves human exposure, property damage, or environmental harm, it is assessed on the “adverse effects **probable**” side of the matrix. All other violations are assessed on the “adverse effects **not probable**” side. As required by rule, WSDA assesses the median penalty unless there are mitigating or aggravating factors involved for which they would assess the minimum or maximum penalty, respectively.

WSDA cannot assess a penalty higher than \$7,500 for a single violation, but the penalty rules (WAC 16-228-1100 through 16-228-1130; below) do allow WSDA to assess penalties beyond the levels in the matrix when there are aggravating factors present. For example, WSDA finds that a pesticide applicator drifted onto several farmworkers causing them all to become ill. If it is a first-time violation, the matrix indicates a penalty of \$450 and/or a 7-day license suspension. Even considering the aggravating factors in this case, the matrix only allows a \$550 fine and/or 9-day license suspension for the maximum penalty. The rules specifically allow WSDA to go beyond this maximum penalty for particularly egregious violations. WSDA uses this authority with discretion, typically when there is willful negligence, when multiple people are affected by a drift, or when multiple growers sustain damage from a single drift event.

According to WAC 16-228-1100(1), “regulatory action is necessary to deter violations of the pesticide laws and rules, and to educate persons about the consequences of such violation...”. Typically PMD assesses both the civil penalty and the license suspension as provided in the penalty matrix. PMD considers the two components essentially equal in weight. When PMD determines that a license suspension would not be an effective deterrent, WAC 16-228-1120(2) allows PMD to “proportionately increase the civil penalty and proportionately decrease the licensing action...” In such cases, PMD doubles the civil penalty while eliminating the license suspension. This occurs most frequently when an infractor does not have a license to suspend, although there can be other circumstances that merit a proportional increase.

Specific requirements for determining the “level of violation” are found in WAC 16-228-1110(2). When a past action has placed an infractor at a specific level of violation, and the infractor commits another violation, PMD must take into account at what point the past action was fully adjudicated. (An action is fully adjudicated on the date that a Final Order is issued by the director.) If the past action has been fully adjudicated, the current violation will normally be assessed at the next level of violation. However, if the current violation is committed prior to the last action being fully adjudicated, the level of violation stays

at the same level as the past action. This can happen when there is a series of violations that occur over a short time frame.

16-228-1130 What is the penalty assignment schedule?

This assignment schedule shall be used for violations of chapter [17.21](#) or [15.58](#) RCW or chapter [16-228](#) WAC. (See WAC [16-228-1150](#) for other dispositions of alleged violations, including Notice of Corrections.)

LEVEL OF VIOLATION	ADVERSE EFFECTS NOT PROBABLE			ADVERSE EFFECTS PROBABLE		
	MINIMUM	MEDIAN	MAXIMUM	MINIMUM	MEDIAN	MAXIMUM
First	\$200 and or 2 days license suspension	\$300 and or 3 days license suspension	\$500 and or 6 days license suspension	\$350 and or 5 days license suspension	\$450 and or 7 days license suspension	\$550 and or 9 days license suspension
Second	\$350 and or 3 days license suspension	\$500 and or 6 days license suspension	\$1000 and or 9 days license suspension	\$600 and 10 days license suspension denial or revocation	\$1300 and 20 days license suspension denial or revocation	\$2000 and 30 days license suspension denial or revocation
Third	\$700 and or 4 days license suspension	\$1000 and or 9 days license suspension	\$2000 and or 12 days license suspension	\$800 and 30 days license suspension denial or revocation	\$2400 and 40 days license suspension denial or revocation	\$4000 and 50 days license suspension denial or revocation
Fourth or more	\$900 and or 5 days license suspension denial or revocation	\$2000 and or 12 days license suspension denial or revocation	\$3000 and or 15 days license suspension denial or revocation	\$1000 and 50 days license suspension denial or revocation	\$4250 and 70 days license suspension denial or revocation	\$7500 and 90 days license suspension denial or revocation

Appendix B

Formal Compliance Enforcement Actions – Final Orders – FY17

Case Number NOI number	Party(ies) Involved/ County of Incident	Description	Action	Date of Final Order
DTB-0018-15 PM-16-0010	Luz Martinez, Jr. Walla Walla County	A September 22, 2015, ground herbicide (desiccant) application to potatoes is alleged to have drifted onto nearby apple orchards causing damage to the fruit and trees.	Settlement of \$2,200 and a twenty (20) day license suspension with Mr. Martinez who was the Commercial Operator making the application.	8/22/16
DLZ-0026-15 PM-16-0015	Enrique Rosales Rosales Landscaping, Inc. Chelan County	A July 14, 2015 WSDA inspection found Rosales Landscaping applying pesticides without a Commercial Applicator license. This was a repeat violation from a 2014 Notice of Correction when Rosales Landscaping was cited for applying pesticides without a Commercial Applicator license.	A Director's Final Order assessed \$600 against Mr. Rosales as the responsible Commercial Applicator making the application and operating the business.	9/22/16
JJR-0004-16 PM-16-0013	Columbia Valley Fruit, LLC Yakima County	An April 13, 2016, Worker Protection Standard (WPS) inspection found Columbia Valley Fruit, LLC, not providing employees the proper training and eye wash stations as required.	A Director's Final Order assessed \$700 against Columbia Valley Fruit, LLC, as the responsible employer.	10/04/16
JJR-0002-16 PM-16-0017	Monson, LLC Yakima County	An April 11, 2016 WSDA Worker Protection Standard (WPS) inspection found several deficiencies with Monson, LLC: 1) Keeping the Central Notification Board current. 2) Proper training of handlers and workers. 3) Including REI as part of oral notification. 4) Providing all the decontamination supplies required. 5) Handlers properly wearing PPE.	Settlement of \$700 with Monson, LLC, as the responsible employer.	10/20/16
JJR-0016-15 PM-16-0016	Champoux Vineyards, LLC Klickitat County	A July 16, 2015 WSDA Worker Protection Standard (WPS) inspection found several deficiencies with Champoux Vineyards, LLC: 1) Keeping the Central Notification Board current. 2) Proper training of workers. 3) Including REI as part of oral notification. 4) Providing all the decontamination supplies required. 5) Handlers properly maintaining their respirators.	A Director's Final Order assessed \$900 against Champoux Vineyards, LLC, as the responsible employer.	10/24/16

Case Number NOI number	Party(ies) Involved/ County of Incident	Description	Action	Date of Final Order
JKZ-0007-14 & JKZ-0012-14 PM-15-0003	H. Dennis Raugust Spokane County	Herbicide applications in April and May of 2014 were alleged to have drifted off target damaging crops on two separate fields.	Spokane County Superior Court dismissed a petition for review and affirmed a June 27, 2016 Director's Final Order which assessed \$900 ⁸ and a fourteen day license suspension against Mr. Raugust who was the Private Applicator making the 2014 herbicide applications.	12/30/16
ACB-0014-16 PM-16-0020	Jon Spanjer Grant County	A March 30, 2016, air-blast orchard pesticide application is alleged to have drifted onto adjacent property and a home creating an exposure potential for a family.	A Director's Default Order assessed \$550 along with a license suspension of nine days against Mr. Spanjer who was the Private Applicator responsible for the application.	1/09/17
TRH-0001-16 PM-16-0018	Christian Ford Grant County	A March 21, 2016, soil fumigation shank application to a field that previously had been in orchard is alleged to have off-gassed after the application with the fumigant gas causing breathing and eye symptoms to a family of five who lived near the field.	Settlement of \$450 and a seven day license suspension with Mr. Ford who was the Commercial Applicator making the application.	2/8/17
DLZ-0009-16 PM-17-0001	Jesus P. Garcia Douglas County	An April 7, 2016, orchard air-blast pesticide application is alleged to have drifted off target onto adjacent property exposing several people.	A Director's Final Order assessed \$450 along with a license suspension of seven days against Mr. Garcia who was the Private Applicator responsible for the application.	3/20/17
RDS-0030-16 PM-17-0002	William J. Grassi Island County	An August 11, 2016, ground boom herbicide application is alleged to have drifted off target across a street onto adjacent property causing exposure concerns for people.	A Director's Final Order assessed \$450 along with a license suspension of seven days against Mr. Grassi who was the Commercial Operator responsible for the application.	3/24/17

⁸ This civil penalty amount is not included in the total in Table 2 because the court was affirming a penalty assessed in FY16.

Case Number NOI number	Party(ies) Involved/ County of Incident	Description	Action	Date of Final Order
RDS-0036-16 PM-17-0003	Scott Spies Homeworks R&R, Inc. King County	An October 10, 2016, pesticide application to the interior of a home using a wood treatment product prior to installation of a shower was made contrary to label. The fumes from the application had short term effects on the family that lived in the home.	A Director's Default Order assessed \$450 against Mr. Spies who was the contractor that applied the wood treatment pesticide.	4/19/17
MJW-0003-16 PM-17-0005	Mike Vincent Vincent Orchards, Inc. Grant County	An April 8, 2016, orchard air-blast pesticide application is alleged to have drifted off target onto an adjacent property and contacted a person.	Settlement of \$450 and a four day license suspension with Mr. Vincent who was the Private Applicator Responsible for the application.	4/27/17
TWS-0001-17 PM-17-0004	Gavin Gillespie Yakima County	On February 28, 2017, Mr. Gillespie attempted to remove from a Yakima pesticide exam session, written information listing specific questions and answers from a pesticide exam. This is defined as cheating and is in violation of WSDA Testing Policies.	A Directors Default Order denied Mr. Gillespie's February 28, 2017, application for a Commercial Operator's pesticide license.	5/4/17
MJW-0007-16 PM-17-0007	Cascade Irrigation District Kittitas County	An April 1, 2016, Cascade Irrigation District herbicide application to its canal system's maintenance road was made too close to an adjacent pear orchard. As a result, the soil residual herbicide is alleged to have moved onto the pear orchard via blowing soil causing damage to the pear crop and fruit trees.	A Director's Final Order assessed \$1,100 against Cascade Irrigation District as the entity responsible for the pesticide selection decisions and applications of its employees.	6/1/17
MJW-0007-16 PM-17-0009	Kelton Montgomery Kittitas County	An April 1, 2016, Cascade Irrigation District herbicide application to its canal system's maintenance road was made too close to an adjacent pear orchard. As a result, the soil residual herbicide is alleged to have moved onto the pear orchard via blowing soil causing damage to the pear crop and fruit trees.	A Director's Final Order assessed \$450 along with a license suspension of seven days against Kelton Montgomery who was the Public Operator responsible for making the application.	6/1/17

Case Number NOI number	Party(ies) Involved/ County of Incident	Description	Action	Date of Final Order
CJS-0015-16 PM-17-0014	Anthony Miller Quality Spray Services, LLC Yakima County	An August 2016, WSDA request to Mr. Miller and Quality Spray Service, LLC, for pesticide application records found that Mr. Miller was continuing to maintain inaccurate, incomplete and fraudulent pesticide application records. Mr. Miller had been cited with a Notice of Correction in May 2014 for the same infraction.	A Director's Final Order assessed \$300 and a three day license suspension against Mr. Miller and Quality Spray Service, LLC, as the responsible person and company.	6/14/17
JGA-0012-16 PM-17-0011	Epic Lawn Care, LLC Benton County	On April 29, 2016, Epic Lawn Care, LLC, had an employee apply an herbicide mix to a customer's ornamental beds. The tank mix contained an additional herbicide which is alleged to have caused more than \$1,000 in damages to ornamental plants.	A Director's Default Order assessed \$900 against Epic Lawn Care as the responsible company.	6/26/17

Appendix C

WPS Civil Penalty Policy

WSDA POLICY REGARDING CIVIL PENALTIES FOR FIRST-TIME VIOLATIONS OF WAC 16-233

Under RCW 43.05.110(3), WSDA may issue a civil penalty, without first issuing a Notice of Correction, if a first-time violation of a statute or rule has a “probability of placing a person in danger of death or bodily harm.” Under RCW 34.05.110(4)(a), an exception may be made to the requirement that agencies allow a small business a period of at least two business days to correct a violation where the director determines that the violation presents a direct danger to the public health, poses a potentially significant threat to human health or the environment, or causes serious harm to the public interest. By way of this Policy, it is determined that the three circumstances outlined in this Policy meet the criteria described in RCW 43.05.110(3) and RCW 34.05.110(4)(a). This Policy recognizes that the requirements of WAC 16-233 are designed to reduce the risk of illness or injury resulting from worker/handler exposure to pesticides. WAC 16-233-005.

Accordingly, under RCW 43.05.110(3) and RCW 34.05.110(4)(a), a first-time violation of WAC 16-233 may be subject to imposition of civil penalties by WSDA under the following three circumstances:

- (1) Violations involving **handlers**:
 - (a) Any significant violation involving personal protective equipment (PPE) or decontamination (WAC 16-233-245 and WAC 16-233-250, respectively);
 - (b) Failure to provide sufficient training to handler prior to mixing or applying category 1 pesticides, unless the handler is exempt from training requirements (WAC 16-233-225);
 - (c) Failure to inform handler of label safety requirements, or provide a label (WAC 16-233-230), for category 1 pesticides; or
 - (d) Failure to monitor handler every 2 hours for category 1 applications (WAC 16-233-210(2)).
- (2) Violations involving **workers** where the nature of the violation results in 8 or more points under the matrix below:

Violations Involving Workers			
Factor	Weight	Points	
Toxicity (select product with highest toxicity that applies) as indicated by the signal word on the pesticide label.	Danger-Poison Danger Warning Caution	(4) (3-4) (2) (1)	
Time Elapsed from application to exposure, unless exceptions to the time requirements apply. (WAC 16-233-120)	During application Within 24 hours 24 to 72 hours More than 72 hours	(4) (3) (2) (1) (0)	

	Restricted Entry Interval Expired		
PPE (primarily use, but can include cleaning, storage, etc. as well). (WAC 16-233-120)	Not provided Very Poor Poor Fair, but not complete	(4) (3) (2) (1)	
Decontamination. (WAC 16-233-150)	Not provided Major deficiency and/or inaccessibility Minor deficiency and/or inaccessibility	(3) (2) (1)	
Posting, notification or application information provided as required. (WAC 16-233-125 and 16-233-130, respectively)	Not properly provided:	(3-4)	
Total			

(3) Violations involving failure to provide emergency assistance to workers or handlers. (WAC 16-233-255)

Appendix D

List of Acronyms/Abbreviations

ALJ	Administrative Law Judge
C&T	Certification and Training
DOH	Washington State Department of Health
Ecology	Washington State Department of Ecology
EPA	Environmental Protection Agency
FEP	Farmworker Education Program
LCB	Washington State Liquor and Cannabis Board
L&I	Washington State Department of Labor & Industries
MSDS	Material Safety Data Sheet
NAI	No Action Indicated
NOC	Notice of Correction
NOI	Notice of Intent
PCO	Pest Control Operator
PMD	Pesticide Management Division
PPE	Personal Protective Equipment
RCW	Revised Code of Washington
SPI	Structural Pest Inspector
TSEP	Technical Service and Education Program
WAC	Washington Administrative Code
WDO	Wood Destroying Organism
WPS	Worker Protection Standard
WSDA	Washington State Department of Agriculture