



STATE OF WASHINGTON
DEPARTMENT OF AGRICULTURE
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January 28, 2019

To: Members of the Washington State Legislature
From: Derek I. Sandison, Director 
Re: Pesticide Management Division 2018 report to the Legislature

I respectfully submit this report titled “2018 WSDA Pesticide Management Division Annual Report to the Legislature” as required by legislative mandate.

At the Washington State Department of Agriculture, we take seriously our role as the agency responsible for regulating pesticides in our state. That role includes registering pesticides for use, ensuring pesticide applicators are properly licensed, training farmworkers involved in agricultural applications, investigating complaints of pesticide misuse, and safely disposing unwanted pesticide product.

Our Pesticide Compliance Program continues to conduct important investigations and routine inspections of pesticide users to address human and environmental health concerns. In FY 2018, we conducted 152 investigations, 73 of which (48%) were related to agricultural activities. Of those 73 investigations, 82 percent involved potential drift incidents. Six of those cases involved violations with impacts related to human health.

WSDA intends to persist in its efforts to reduce such incidents, which illustrate the continued need for education, technical assistance and outreach to pesticide applicators and handlers.

In Fiscal Year 2018, as part of a continuing emphasis on prioritizing public and environmental health, WSDA trained more than 3,000 farmworkers and pesticide handlers at 40 events across the state. The program is recognized as an effective and essential component of our state’s agricultural production and is highly valued by the agricultural community.

Most of our training sessions are full for the upcoming two winter training seasons. We are grateful for the inclusion of funding for two more trainers in Governor Inslee’s 2019-2021 proposed budget to help expand our training program as well as meet current training demands.

Additionally, the Pesticide Compliance Program has now established a new technical assistance position focused on improving pesticide sprayer calibration and providing applicators with best management practices that reduce human exposure risks. This technical assistance resource will be available upon request statewide with outreach through a pilot program in the spring of 2019.

Finally, WSDA will be analyzing its internal pesticide enforcement protocols in the coming year and evaluating what changes are necessary to reduce the number of pesticide human exposure cases.

These efforts are just some of the activities WSDA intends to undertake to fulfill its obligation to protect human health and the environment while ensuring the effective, safe, and prudent use of pesticides.

2018

WSDA Pesticide Management Division Annual Report to the Legislature

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

February 2019



Washington
State Department of
Agriculture

Derek I. Sandison, Director

AGR PUB 701-747 (N/2/19)

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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 2018 (FY18):

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 almost 11,000 exams to license professional pesticide applicators, consultants, dealers and structural pest inspectors.
- Certified over 30,000 individuals (applicators, consultants, dealers) and issued nearly 37,000 licenses (includes individuals with multiple licenses).

Pesticide Technical Services and Education Program

- Provided safety training to more than 3,000 farm workers and trainers
- Collected and disposed of 112,930 pounds of waste pesticides, reducing the risks to public health and the environment.

Pesticide Compliance Services Program

- Conducted 255 inspections to ensure that applicators, dealers, manufacturers and employers comply with state and federal pesticide laws, including 46 inspections at farms, orchards, forests and nurseries to ensure compliance with the Worker Protection Standard (WPS). Forty-five (45) of the 90 distinct WPS violations found concerned inadequate safety training or decontamination supplies, and twenty-six (26) involved notification of applications.
- Conducted 152 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 28,000 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 152 investigations:
 - About 25 percent found no violation or that the problem was not pesticide-related.
 - 133 (87.5 percent) related to possible pesticide application, storage, or disposal issues.
 - 19 (12.5 percent) related to licensing or distribution incidents.
 - 103 investigations were in Eastern Washington; 48 in Western Washington.
 - 73 (48 percent) were agricultural investigations (farming, forestry, nurseries or greenhouses), with 62 of them in Eastern Washington and only 11 in Western Washington.
 - Drift investigations accounted for 82 percent of the 73 agricultural investigations. Only six 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 2018¹ (FY18):

- **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 2018 = July 1, 2017 – June 30, 2018

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 pesticide applicators, operators, consultants, dealers and commercial pesticide application equipment must be licensed (as per Chapters 15.58 and 17.21 RCW). 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 18, under RCW 15.58.405, the Registration section also:

- Issued six new Section 24c Special Local Need (SLN) registrations for specialty crops (e.g., alfalfa seed, carrot seed, hops) with particular pest problems for which there is not a federally registered pesticide available.
- Submitted three requests to the U.S. Environmental Protection Agency (EPA) for Section 18 Emergency Exemptions from registration for specialty crops (eg., alfalfa seed, asparagus, mint) with urgent, emerging or atypical pest situations that will result in significant economic loss.
- Issued 18 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 FY18 PMD:

- Administered 10,975 exams to new potential licensees.
- Certified over 29,784 individuals (applicators, consultants, dealers).
- Issued 36,819 licenses (includes individuals with multiple licenses).

Table 1 Pesticide Licenses Issued - FY18

License Type	Number Issued		License Type	Number Issued
Commercial Applicator	1,942		Commercial Consultant	1,292
Commercial Operator	7,904		Dealer Manager	1,942
Private Applicator	13,287		Public Consultant	109
Limited Private Applicator	131		Structural Pest Inspector	970
Rancher Private Applicator	125		Demonstration & Research	233
Public Operator	6,621		Certified Trainer	849
Private Commercial	1,414			

PMD also accredits continuing education courses conducted by a variety of sponsors, and accredited 1,688 recertification sessions within 693 courses in FY18. A total of 206 sessions (12 percent of all sessions) were 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, Chapter 16-233 WAC (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 18 included 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 2 TSEP Training Totals - FY18

Training	Attendees	Events	Establishments represented
Hands-on Handler (Traditional and Hybrid)	2,319	19	415
Train-the-Trainer	250	10	150
Pre-license	210	6	129
Pesticide Application BMP’s	159	4	66
Other Worker and Handler	70	1	1
TOTAL	3,008	40	761

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 30 years, WSDA has collected more than 3.4 million pounds of waste pesticides from 8,526 customers (average of over 400 pounds/customer), 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 long-term liability.

In FY 18, PMD:

- Held 10 waste collection events across the state.
- Collected and properly disposed of 112,930 pounds of unwanted pesticides (an average of 523 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 3. Overview of PMD Compliance Activity - FY18

	TOTAL	Resulting PMD Enforcement Actions		
		Total	NOC	NOI
Inspections	255*	162	154	8
Investigations	152**	60	48	12
Civil Penalties Assessed***	\$7,400			

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

** Includes one marijuana investigation over which the Liquor and Cannabis Board has enforcement authority.

***Reflects final orders issued in FY18. Civil penalties assessed in FY2018 may not correlate to violations identified in FY2018. 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 FY18 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 4. Inspections Conducted and Enforcement Actions Issued – FY18

Inspection type	No. of inspections	Resulting PMD enforcement actions		
		Total	NOC	NOI
Agricultural Use	27	16	15	1
Non-Agricultural Use	47	25	25	0
Other				
Applicator Licensing/Records	40	25	23	2
Dealer Records	39	30	30	0
Market Place	50	34	32	2
Worker Protection Standards	46	32	29	3
Producer Establishment*	6	*	*	*
TOTAL	255	162	154	8

* 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 FY18, PMD’s compliance staff conducted 46 WPS inspections, almost all of them unannounced. While all types of agricultural establishments must comply with WPS, over half of the WPS inspections were at orchards (see Table 5, below), where a lot of hand labor and frequent pesticide applications occur.

Table 5. WPS Inspections by Site – FY18

Inspection Site	No. of WPS Inspections	Tier 1*	Tier 2*	Resulting PMD enforcement actions		
				Total	NOC	NOI
Orchards	24	23	1			
Row and Field Crops	2	2	-			
Nursery/Greenhouse	7	6	1			
Vineyards	3	3	-			
Combinations of Above	5	5	-			
Other	5	2	3			
TOTAL	46	41	5	32	29	3

*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. Many of the WPS inspections found multiple violations—31 of the 46 sites inspected were responsible for 90 distinct violations (see Table 6, below). As a result, 29 NOCs and 3 NOI were issued. See also Appendix C.

Table 6. WPS Violations by Inspection Element – FY 18

Inspection Elements	No. of Violations
Decontamination Supplies	21
Pesticide Safety Training	24
Central Notice Posting	26
Personal Protective Equipment	11
Notice of Application	6
Label Information Provided	-
Mix/Loading, Applications and Equipment	-
Emergency Assistance	-
Entry Restrictions	2
Information Exchange	-
Total	90

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

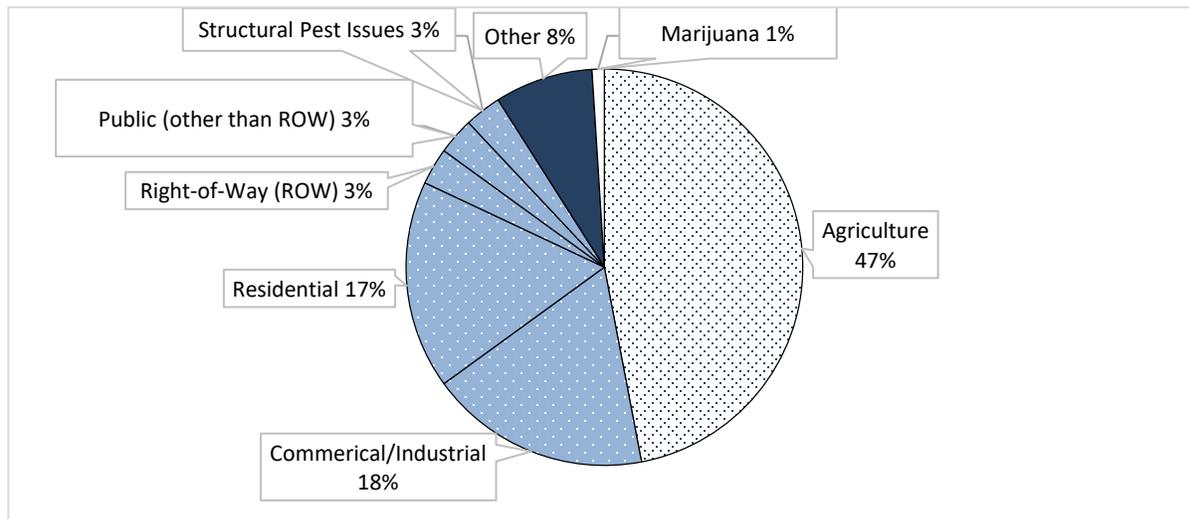
- PMD responded to 47 of 50 human exposure complaints within 24 hours of receipt.
- Most of those responses (43) were on the same day the complaint was received.
- Of those cases⁵ that did not involve human exposure, all but one met the 48-hour response requirement.

During FY18 (July 1, 2017 - June 30, 2018), PMD conducted 152 investigations in a variety of settings, related to a variety of activities (see Figure 1 and Tables 7 and 12):

- 133 (87.5 %) related to possible⁶ pesticide application, storage, or disposal issues.
- 4 (2.6 %) related to structural pest issues (may or may not have included application issues).
- 19 (12.5%) related to licensing, distribution or other incidents not related to pesticide application.

Considering that more than 28,000 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 - FY18



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 7. Overview of PMD Investigations – FY18

	TOTAL	Allegations* of drift	Other issues (non-drift)	Involving orchards	Non-orchard settings
Agricultural Investigations*	73	60	13	30 Includes 28 applications made by air-blast sprayer	30 Includes a diversity of cropping systems, application methods, and pesticide types.
Non-Agricultural Investigations*	59	40	19	na	na
Other (licensing, distribution)	19	0	19	na	na
Marijuana	1	0	1	na	na
TOTAL	152	100	52		

*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 29 allegations of human exposure with 26 of those associated drift). Only six of the 26 were significant human exposure incidents.
- 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 21 allegations of human exposure with 16 of those associated with drift. Only two of the 16 were significant human exposure incidents.
- A marijuana investigation was 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 this case was to assist LCB with sampling of marijuana plants and product.

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 55 more investigations than Western Washington staff (Table 8).

Table 8. PMD Investigations by County - FY18

Eastern WA Counties	No. of Investigations		Western WA Counties	No. of Investigations
Adams	3		Clallam	1
Asotin	0		Clark	6
Benton	11		Cowlitz	3
Chelan	14		Grays Harbor	1
Columbia	1		Island	0
Douglas	2		Jefferson	0
Ferry	0		King	7
Franklin	1		Kitsap	2
Garfield	0		Lewis	2
Grant	12		Mason	1
Kittitas	2		Pacific	0
Klickitat	4		Pierce	6
Lincoln	1		San Juan	1
Okanogan	7		Skagit	2
Pend Oreille	0		Skamania	0
Spokane	16		Snohomish	3
Stevens	1		Thurston	8
Walla Walla	9		Wahkiakum	0
Whitman	4		Whatcom	5
Yakima	15		W. WA Total	48
E. WA Total	103			
Other: One case involved product distribution via internet and was not assigned a County				
Combined WA Total - 152				

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 48 investigations in Western Washington, only 11 involved commercial agriculture (includes two forestry and one Christmas tree investigation).

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 9. Investigations by Pesticide Type - FY18

Pesticide Type	Number of Investigations
Herbicides Only (weed killer)	43
Insecticides Only	25
Fungicides	5
Combination of products*	43
Other Pesticide Types**	5

*Commonly an insecticide or herbicide combined with a fungicide

**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 152 investigations PMD conducted in FY18 (i.e., agricultural, non-agricultural and other – see Table 12), the vast majority had no direct impact on human health:

- 40 (26%) - no violation found.
- 96 (63%) - no or minor adverse impacts, no human illness.
- 8 (5.3%) – human exposure and illness, no human deaths.
- 8 (5.3%) -significant plant/crop damage or environmental effects..

“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 FY18, about 66 percent of all PMD investigations related to allegations of drift. Of these 100 pesticide drift allegations, 60 were in the agricultural sector and 40 were in the non-agricultural sector (see Table 7).

Of the 100 drift investigations:

- 19 (19%) - no violation found.
- 70 (70%) - no or minor adverse impacts, no human illness.
- 11 (11%) - human illness or significant environmental effects, no human deaths.

Although there were 42 investigations of human exposure related to alleged drift, no violation was found in four (4) of them. However, eight (8) investigations were related to human exposure that resulted in symptoms or illness. See Table 10, below.

Table 10. Severity of Impact by Type of Drift Investigation – FY18

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 60	Human Exposure	3	17	6
	Crop or plant damage	2	10	3
	Other*	8	11	-
<hr/>				
Non-Agricultural 40	Human Exposure	1	13	2
	Crop or plant damage	2	12	-
	Other*	3	7	-
TOTAL 100		19	70	11

* 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. In FY18 WSDA assisted LCB with one marijuana pesticide investigation. Sample results from that investigation showed positive detections for pesticides that are not allowed on marijuana. Pesticide regulation and investigations related to marijuana would benefit from the development of an accreditation program. The department supports the ongoing efforts of the Liquor and Cannabis Board, WSDA Chemical and Hop Lab and the Department of Ecology to establish these methods and associated accreditation

Table 11. Pesticide Use in Marijuana - FY18

TOTAL investigations	Cases w/ evidence of unapproved pesticide use	Cases w/no evidence of unapproved pesticide use
1	1	0

Enforcement

Of the 152 investigations PMD conducted in FY18, 61 resulted in formal or informal actions. See Table 12, below.

Table 12. PMD Investigations and Actions by Type of Activity - FY18

Activity	No. of Investigations	No. Resulting in Actions
AGRICULTURAL	72	36
NON- AGRICULTURAL		
Commercial/Industrial	27	14
Public (other than Right of Way)	4	-
Residential (noncommercial)	26	4
Right of Way	5	3
Structural Pest Issues	4	3
MARIJUANA	1	-
OTHER (License/Distribution)	13	1
TOTAL	152	61

Table 13. PMD Corrective Actions as Result of Investigation - FY18.

Action Type	Actions Issued or Pending
Notice of Correction (NOC)	50
Notice of Intent (NOI)	11
Total	61

Note: Count represents the most stringent action issued for each case.
If corrections were not made in response to a NOC, and an 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 – FY18

Case Number NOI number	Party(ies) Involved/ County of Incident	Description	Action	Date of Final Order
RAS-0012-17 PM-18-0013	Robert Slack Sunnyside Valley Irrigation District	Robert Slack admitted to cheating on a WSDA Aquatic Irrigation pesticide exam in Yakima.	A Director's Default Order revoked his Aquatic Irrigation category effective May 22, 2018, with no opportunity to re-apply and test until September 14, 2018.	5/22/18
RAS-00012-17 PM-18-0012	Jimmy Salinas Sunnyside Valley Irrigation District	Jimmy Salinas admitted to cheating on a WSDA Aquatic Irrigation pesticide exam in Yakima.	A Director's Default Order revoked his Aquatic Irrigation category effective May 22, 2018, with no opportunity to re-apply and test until September 14, 2018.	5/22/18
RAS-00012-17 PM-18-0011	Tyler J. Leighty Sunnyside Valley Irrigation District	Tyler Leighty admitted to cheating on a WSDA Aquatic Irrigation pesticide exam in Yakima.	A Director's Default Order revoked his Aquatic Irrigation category effective May 22, 2018, with no opportunity to re-apply and test until September 14, 2018.	5/22/18
RAS-00012-17 PM-18-0010	Christopher Garza Sunnyside Valley Irrigation District	Christopher Garza admitted to cheating on a WSDA Aquatic Irrigation pesticide exam in Yakima.	A Director's Default Order revoked his Aquatic Irrigation category effective May 22, 2018, with no opportunity to re-apply and test until September 14, 2018.	5/22/18
RAS-00012-17 PM-18-0009	Jakob Anderson Sunnyside Valley Irrigation District	Jakob Anderson admitted to cheating on a WSDA Aquatic Irrigation pesticide exam in Yakima.	A Director's Default Order revoked his Aquatic Irrigation category effective May 22, 2018, with no opportunity to re-apply and test until September 14, 2018.	5/22/2018
RAS-0015-17 PM-18-0007	Alvaro Diaz Crazy Frog LLC	A November 28, 2017, Commercial Applicator Inspection found several deficiencies in licensing and recordkeeping for Crazy Frog LLC, in Kennewick, WA.	A Director's Final Order assessed a \$2400 penalty against Crazy Frog LLC and the commercial applicator as the responsible party.	5/7/2018

CJS-0003-18 PM-18-0008	Ray Morales Peoh Point Lodge LLC.	Mr. Morales placed four packs of mothballs within his rental lodge, not according to label instructions, which allegedly exposed guests staying in the lodge to the pesticide vapors 21 days later.	A Director's Default order assessed a \$450 penalty against Ray Morales as the responsible party.	4/23/2018
RAS-0012-17 PM-18-0002	Prudencio Palomarez Roza Irrigation District	Prudencio Palomarez admitted to removing exam materials from a WSDA Yakima testing session.	A Director's Final Order revoked his Public Operator's License as of January 1, 2018, with no opportunity to re-apply and test until after June 1, 2018.	3/21/2018
RAS-0012-17 PM-18-0003	Aaron Scheler Roza Irrigation District	Aaron Scheler admitted to removing exam materials from a WSDA Yakima testing session.	A Director's Final Order revoked his Public Operator's License as of January 1, 2018, with no opportunity to re-apply and test until after June 1, 2018.	3/12/2018
RAS-0012-17 PM-18-0001	Travis McWhirk Roza Irrigation District	Travis McWhirk admitted to removing exam materials from a WSDA Yakima testing session.	A Director's Final Order revoked his Public Operator's License as of January 1, 2018, with no opportunity to re-apply and test until after June 1, 2018.	3/1/2018
ERE-0012-17 PM-17-0028	Michael Ratigan Grant County	A July 14, 2017 aerial herbicide application to a grass hay field drifted onto adjacent property causing damage to a variety of landscape and garden plants.	Settlement of \$550 and a seven day license suspension with Mr. Ratigan who was the Commercial Operator making the application.	2/1/2018
ACB-0028-17 PM-17-0027	Trugreen, Limited Partnership Spokane County	A July 11, 2017, Trugreen pesticide application was made to a landscape and a person on the WSDA Pesticide Sensitive Registry was alleged to have not been properly pre-notified.	A Director's Final Order assessed \$600 against Trugreen Limited partnership as the responsible pesticide application business.	12/27/17
CJS-0028-17 PM-17-0026	Jesus Cervantes Yakima County	On June 29, 2017, Mr. Cervantes was supervising five pesticide air-blast sprayers treating an apple orchard. It is alleged that at least one of the sprayers drifted onto an adjacent orchard exposing two farm workers.	A Director's Final Order assessed \$900 and a fourteen day license suspension against Mr. Cervantes as the responsible Private Applicator in charge of the application.	12/12/17

JGA-0022-17 PM-17-0023	Monson Ranches Snake River Orchard Benton Count	An August 15, 2017, WSDA Worker Protection Standard (WPS) inspection found several deficiencies with Monson Ranches Snake River Orchard: 1) Posting an approved WPS Safety Poster and the required pesticide application information on the Central Notification Board. 2) Providing proper training for handlers and employees that maintain equipment. 3) Providing adequate decontamination sites on the farm. 4) Providing one pint eyewash for handlers during applications. 5) Providing pesticide application information to commercial applicators and crop advisors that perform a service on the farm.	A Director's Default Order assessed \$900 against Monson Ranches Snake River Orchard as the responsible employer.	11/3/17
BAO-0022-17 PM-17-0024	Bradley Willms ACMT, Inc. Chelan County	Mr. Willms and ACMT, Inc. performed pesticide applications between May and August of 2017 with a suspended Commercial Applicator license due to not having current proof of insurance on file with the WSDA.	A Director's Final Order assessed \$300 and a three day license suspension against Mr. Willms and ACMT, Inc. as the responsible Commercial Applicator.	10/30/17
MJW-0007-16 PM-17-0008	Richard Lee Kittitas Count	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.	Settlement of \$450 and a license suspension of nine days with Mr. Lee who was the District Manager responsible for overseeing the pesticide application program.8/14/17	8/14/17
JGA-0004-16 PM-17-0006	Richard Stevens Yakima County	In the late spring of 2016, an herbicide application performed by Mr. Stevens is alleged to have drifted across a county road onto an apple orchard causing damage to the apple crop and fruit trees.	Settlement of \$800 with Mr. Vincent who was the responsible person for the application.	7/24/17
ACB-0025-16 PM-17-0012	Rainer Seeds, Inc. Lincoln County	A May 27, 2016, pesticide (fumigant) application by Rainer Seeds, Inc., was improperly performed. Fumigant tablet remnants were not entirely exhausted when collected and upon disposal reacted releasing phosphine gas exposing eleven people causing all eleven to be hospitalized for treatment.	A Director's Final Order assessed \$7,500 against Rainer Seeds, Inc. as the responsible employer overseeing employees performing the fumigation.	7/11/17
ACB-0025-16 PM-17-0013	Eric Orvis Lincoln County	A May 27, 2016, pesticide (fumigant) application by Mr. Orvis was improperly performed. Fumigant	A Director's Final Order assessed \$1,100 against Mr. Orvis as the responsible	7/11/17

		tablet remnants were not entirely exhausted when collected and upon disposal reacted releasing phosphine gas exposing eleven people causing all eleven to be hospitalized for treatment.	employee performing the fumigation.	
BAO-0016-16 PM-17-0010	Fred Smith Chelan County	On July 4, 2016, Mr. Smith's orchard air-blast application is alleged to have drifted onto an adjacent county road exposing two people that were passing by on a motorcycle.	Settlement of \$900 and a license suspension of seven days with Mr. Smith who was the responsible Private Applicator.	7/10/17

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	(4)	
	Danger	(3-4)	
	Warning	(2)	
	Caution	(1)	
Time Elapsed from application to exposure, unless exceptions to the time requirements apply. (WAC 16-233-120)	During application	(4)	
	Within 24 hours	(3)	
	24 to 72 hours	(2)	
	More than 72 hours	(1)	

	Restricted Entry Interval Expired	(0)	
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