

**OREGON OSHA  
PESTICIDE EMPHASIS PROGRAM  
ANNUAL REPORT  
Federal Fiscal Year 2020**



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**Introduction:**

Oregon OSHA and the United States Environmental Protection Agency (EPA), Region 10 Enforcement and Compliance Assurance Division in the Air & Toxics Enforcement Section, collaborate on pesticide safety issues. Oregon OSHA enforces the Worker Protection Standard, which is supplemented with a pesticide emphasis program. This report is the annual review of the pesticide emphasis program for federal fiscal year 2020 (FY2020). The data elements and analysis are presented, along with recommendations for program improvements for the coming year.

**Data Elements:**

The data elements examined in this report are based on Oregon OSHA’s Program Directive A-235, entitled “Local Emphasis Program for Pesticides.” Inspections were completed from a programmed list selected from these North American Industrial Classification System (NAICS) codes which will be referred to as “selected NAICSs” for the purposes of this report.

- NAICS 111219 & 111998 General farming, field Crops, except Cash Grains, Not Elsewhere Classified
- NAICS 111339 Deciduous Tree Fruits
- NAICS 111421 Nurseries & Tree Production
- NAICS 111422 Floriculture Production
- NAICS 111332 Grape Vineyards
- NAICS 111419 Crops Grown Undercover (primary focus Cannabis)
- NAICS 113110 Timber Tract Operations
- NAICS 115112 Crop preparation including pesticide spraying

NAICS were selected based on the amount and toxicity of pesticides in use, frequency of pesticide applications, the diversity of crops, and the number of workers employed, and work practices in use. Other NAICSs inspected as a result of complaints, referrals or accident inspections are included in this report if the inspection addressed pesticide-related issues.

**Data Summary:**

Pesticide exposures occur throughout the handling process, from purchase to disposal. The goal of the Pesticide Emphasis Program is to reduce occupational exposures to pesticides in agriculture through enforcing the pesticide-related standards such as the Worker Protection Standard, Hazard Communication, Respiratory Protection, Pesticide Storage, Fumigation, and supervision. Implementation of these requirements can reduce the likelihood of exposures resulting in acute or chronic effects. The Pesticide Emphasis Program continues to be an effective tool for disseminating information, education, compliance assistance and enforcement activities to reduce occupational exposures to pesticides in the agriculture industry.

The following is a brief summary of the findings resulting from the evaluation of FY2020 activity. Please see each section for tables and explanations of each.

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## ◆ Inspection Activity:

Inspection activity in FY 2020 was significantly impacted by the ongoing COVID-19 Pandemic that forced a statewide office closure in late March. In FY2020, 29 inspections were done, with 24 inspections resulting in citations, with 772 employees covered, up from FY2019. The Worker Protection Standard (WPS) was applicable in 17 inspections, indicated by Tier 1 and Tier 2 in the table below. For all pesticide emphasis inspections where WPS was applicable, 71% (12/17) were classified as Tier 1 and 29% (5/17) were Tier 2. Inspections where pesticides have been used within the preceding 30 days plus the restricted entry interval are classified as Tier 1; inspections where pesticides have not been used within the preceding 30 days plus the restricted entry interval are classified as Tier 2.

In the selected NAICS, 15 inspections were conducted with citations issued in 13 cases, of these, 73% (11/15) were classified as WPS Tier 1 inspections. Of the 29 pesticide emphasis inspections, 41% (12/29) fell outside the scope of the Worker Protection Standard.

Cannabis inspections were pulled from 2 different NAICS codes – 2 from 111998 and 1 from 111419 and listed together under Cannabis. Citations were issued in all of the Cannabis inspections.

### Statistics for Completed Inspections by Industry (NAICS), FY2020

Industry (NAICS)		Completed inspections	Citation issued	No citation	Percent with citation issued	Percent with no citation issued	WPS Tier 1	WPS Tier 2	Pesticide Emphasis Non-WPS	Employees covered
Selected NAICS	111219	1	1	0	100	-	1	-	-	50
	111332	1	1	0	100	-	1	-	-	1
	111339	1	1	0	100	-	1	-	-	1
	111421	8	6	2	75%	25%	7	1	-	237
	111998	1	1	0	100	-	0	1	-	1
	Cannabis	3	3	0	100	-	1	2	-	13
	115310	1	1	-	100	-	-	-	1	8
	312120	1	1	-	100	-	-	-	1	6
	322121	1	-	1	-	100	-	-	1	135
	424690	1	1	-	100	-	-	-	1	3
	519190	1	1	-	100	-	-	-	1	150
	561710	1	1	-	100	-	-	-	1	28
	561730	2	2	-	100	-	-	-	2	5
	561790	1	1	-	100	-	-	-	1	20
	611110	1	-	1	-	100	-	-	1	81
	621420	1	1	-	100	-	-	-	1	7
	624410	1	1	-	100	-	-	-	1	15
	922140	1	-	1	-	100	-	1	-	6
	924120	1	1	-	100	-	1	-	-	5
<b>Total</b>		<b>29</b>	<b>24</b>	<b>5</b>	<b>83%</b>	<b>17%</b>	<b>12</b>	<b>5</b>	<b>12</b>	<b>772</b>

Source: Information Management Division, Oregon Department of Consumer and Business Services, November 2020

Based on the types of inspections listed below, 9 were programmed planned. There were 11 complaint inspections with 91% (10/11) receiving citations; of these, 80% (8/10) had serious violations. There were 8 referrals in FY2020 with 75% (6/8) receiving citations; all with serious violations. Complaints accounted for 38% (11/29) of the total inspections conducted. Cannabis inspections in the table below were not grouped as a stand alone entity and appear under the two NAICS codes.

**Attempted and completed inspections by inspection type and industry (NAICS), FY2020**

	Total	Selected NAICS					Other NAICS
		111219	111339	111332	111421/ 111422	111998	
Total completed inspections	29	1	1	1	8	3	15
Complaint	11	1	1	-	3	1	5
Referral	8	-	-	-	-	-	8
Programmed Planned	9	-	-	1	5	2	1
Nonprogrammed Related	1	-	-	-	-	-	1
Follow-up	0	-	-	-	-	-	-
Attempted (triple zero)	3	2	-	-	-	-	1

*Source: Information Management Division, Oregon Department of Consumer and Business Services, November 2020*

## ◆ Violation characteristics:

The following table highlights the distribution of violations. In FY2020, there were 81 pesticide related violations cited with penalties totaling \$4,665. WPS penalties accounted for \$1,240 overall. In the selected NAICS, WPS violations accounted for 44% (26/59) of the violations cited with penalties totaling \$1,000. Pesticide-related violations accounted for 33 violations with penalties totaling \$880. WPS and pesticide related violations in the Cannabis sector accounted for 29% (17/59) of the total in the selected NAICS. The resulting penalties totaled \$400, 21% of the total. Pesticide-related violations, excluding WPS, include the Oregon OSHA standards addressing hazard communication, respiratory protection, personal protective equipment, emergency eyewash, fumigants, supervision, pesticide storage, and work-site inspections.

### Pesticide Violations and Penalties in FY2020 Totals

Industry (NAICS)		Total Pesticide Related Violations	WPS Violations				Other Pesticide Related Violations			
			Serious	Other than serious	Repeat	Total penalties	Serious	Other than serious	Repeat	Total penalties
Selected NAICS	111219	0	0	0	-	0	0	0	-	0
	111339	1	1	0	-	\$120	0	0	-	0
	111332	5	0	3	-	0	0	2	-	0
	111421	32	8	10	-	\$880	8	6	-	\$380
	111998	4	0	0	-	0	1	3	-	\$100
	Cannabis	17	0	4	-	0	6	7	-	\$400
<b>Totals</b>		<b>59</b>	<b>9</b>	<b>17</b>	<b>0</b>	<b>\$1000</b>	<b>15</b>	<b>18</b>	<b>0</b>	<b>\$880</b>
	115310	2	-	-	-	-	2	-	-	\$175
	312120	4	-	-	-	-	3	1	-	\$630
	424690	1	-	-	-	-	1	-	-	\$180
	519190	1	-	-	-	-	1	-	-	\$240
	561710	4	-	-	-	-	4	-	-	\$400
	561730	2	-	-	-	-	2	-	-	\$310
	561790	4	-	-	-	-	4	-	-	\$420
	624410	3	-	-	-	-	3	-	-	\$270
	924120	1	1	-	-	240	-	-	-	-
<b>Totals</b>		<b>22</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>240</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>\$2445</b>
<b>Grand Total</b>		<b>81</b>	<b>10</b>	<b>17</b>	<b>0</b>	<b>\$1240</b>	<b>35</b>	<b>19</b>	<b>0</b>	<b>\$3425</b>

Source: Information Management Division, Oregon Department of Consumer and Business Services, November 2020

If a WPS violation is grouped with another violation, the WPS and non-WPS violations are counted separately, but the penalty amount for the whole group is retained with the WPS violation.

The violations below are classified as either handler or worker related using the definitions in the Worker Protection Standard. A handler is an employee who either mixes, loads, applies, or works on spray equipment and can be exposed to the concentrated form of the pesticide. Workers are employees who are working with plant materials that may have pesticide residue on them. The most frequently violated standards were for combined personal protective equipment (PPE-Respirators and PPE-Other) followed by hazard communication issues not including training.

**Pesticide Violations Cited in FY2020**

	Violation type	Violations
Handler related	PPE Respirators	15
	PPE- Other	12
	Hazard communication	10
	Pesticide storage	4
	Training & trainer qualifications	8
	Decontamination	1
	Emergency eyewash, first aid	7
	Health Hazard Control Measures	1
Worker related	Spray contacting unprotected person	1
	Display of Pesticide Info	9
	Decontamination	3
	Training & trainer qualifications	6
	Safe Practices brochure	4
	Non-pesticide related	11

*Source: Information Management Division, Oregon Department of Consumer and Business Services, November 2020*

**Pesticide Analytical Response Center (PARC) Cases:** For the 9 PARC cases listed, WPS applied in two cases. The pesticides primarily involved disinfectants/sanitizers/biocides, two of these sent multiple people to the hospital after chemical reactions occurred. Six of the nine PARC cases originated as complaints to Oregon OSHA. Bystander exposures accounted for the most frequent route of exposure.

Source	Exposure Type	Product	Signal Word	# Exp	Type of Establishment	WPS Applies	Citation Issued	Primary cause	Medical Treatment sought
C	Use	GM6000 + Bleach		1	Residential care		✓	Heat stress	
C	Bystander	Raid EPA Reg.# 4822-567		1	Drug treatment		✓	Lack of information sharing	
C	Bystander	Orbio os3- MultiMicro200		1	School buses			Inhalation, lack of information sharing	✓
C	Use	Barbicide EPA # 34810-31-954	Danger	1	Hair salon			Dilution issues	
OERS*	Bystander	Reflex Acid Sanitizer EPA # 63838-12	Danger	3	Brewery		✓	Chemical reaction incompatibles	✓
OERS + C	Bystander			1	Tree nursery	✓	✓	No recent applications identified	
OERS*	Bystander	Spectrum XD3899 EPA # 8622-64-74655	Caution	5	Paper mill		✓	Chemical reaction incompatibles	✓
PARC*	Bystander	Oust XP EPA #432-1552 Glyphosate EPA#81927-8 EscortXP EPA#432-1549 Imazapr4SL EPA#81927-24	Caution	1	Forestry	✓	✓	Drift	
C*	Use	Clorox Bleach EPA # 5813-100	Danger	1	Day care center		✓	Product used full strength (label not followed)	✓

Source: C = Complaint filed with Oregon OSHA; R = Referral from PARC; OERS = Oregon Emergency Response System; # exp = the number exposed; \* indicates narrative to follow. Blue shading indicates the case involved a disinfectant.

## PARC Cases Highlighted

The following narratives (referenced in the previous table with an asterisk) by the type of establishment provide a synopsis for a variety of cases.

**Day Care Center:** Originating as a complaint to Oregon OSHA, this case was referred to PARC when the agency became aware the disinfectant used was an EPA Registered product. The supervisor had directed an employee to use the product, Clorox Bleach (EPA Reg. # 5813-100) full strength against the label directions which lead to the employee experiencing severe respiratory distress resulting in treatment at the hospital. After the employee returned to work, the employee was asked to perform the same task again. The employer was cited multiple serious violations, including the Safety Data Sheet being unavailable, lack of personal protective equipment, and failure to perform the personal protective equipment hazard assessment.

**Craft Brewery:** The Oregon Emergency Response System (OERS) and PARC notified Oregon OSHA about an incident involving a sanitizer at a craft brewery which sent 3 employees to the hospital with severe respiratory distress and forced the facility to evacuate. The accident investigation revealed the draw tubes from the sanitizer Reflex Acid (EPA Reg. #63838-12) container had been placed in such a manner to come into contact with caustic materials as part of the Cleaning-In-Place (CIP) system used by the brewery. The caustic traveled via gravity into the Reflex Acid resulting in a violent chemical reaction. The employer was cited for multiple serious violations.

**Paper mill:** This was the second PARC incident occurring at a paper mill in the last two years. The Oregon Emergency Response System reported a chemical reaction incident with a biocide which sent 5 employees to the hospital with severe respiratory distress. A chemical contractor employee had transferred a biocide - Spectrum XD3899 (Ammonium bromide) into a poly tank containing Sodium hypochlorite which produced gaseous chlorine and bromine that entered the mill forcing an evacuation. The contractor employer was cited for one serious violation. The previous PARC incident involving a paper mill occurred when a malfunctioning biocide injector dumped 17 gallons into the starch cooker which sent vapors into the upstairs paper machine area and a paper testing lab resulting in 11 employees experiencing respiratory irritation symptoms.

**Forestry:** A referral from PARC initiated a cooperative investigation between the Oregon Department of Agriculture (ODA) and Oregon OSHA, rather than a joint investigation due to COVID-19, involving another PARC member agency on state timberlands. An Oregon Department of Forestry(ODF) employee was contacted by herbicide drift (Oust XP EPA # 432-1555; Glyphosate EPA#81927-8; Escort XP EPA #432-1549; Imazapyr 4SL EPA # 81927-24) during a helicopter operation while acting as a trail blocker. ODF manages state forest lands and it is their customary practice to block all access points to prevent the public from entering into an active treatment operation. ODF staff participate in the operation in one of two ways. One employee is involved in managing the helicopter activities while multiple other employees are involved in blocking roads and trails. The employee in charge of this group establishes "points" or locations at all access trails and roads which are set outside of the application exclusion zone (AEZ) where employees block access. Maps are provided with their exact blocking locations. Prior to the helicopter taking off, radio checks are made with the road blockers to confirm they are at their assigned locations. On the day of the incident, the affected employee indicated he was in position. He was not. He had parked his truck just off the road at the edge of the unit, approximately 60' from the helicopter's closest pass. Fortunately he did not suffer adverse affects from his dermal exposure. ODA confirmed the presence of off target movement. The employer representative was unaware of the employee's location, and the employee, a licensed pesticide applicator who had also received training on WPS, including the AEZ, had indicated he was out of the treatment area so he did not feel there a problem. The employer was cited for a related WPS violation.



◆ **External Training:**

External training consists of speaking requests performed in conjunction with Oregon Department of Agriculture credit events and workshops put on by the Oregon OSHA Public Education Section. Chemeketa Community College continues to offer Respiratory Protection for Agricultural Operations as well as a variation for Wineries specific to Sulfur Dioxide. Speaking requests were conducted mostly in conjunction with day long multi-pesticide agendas put on by grower groups, such as the Northwest Ag Show, the Oregon Department of Agriculture, or the Oregon State University Pesticide Safety Education Program (PSEP), for the purpose of maintaining credits for pesticide licensees.

**Oregon OSHA speaking requests in FY2020**

Date	Topic	Attendees
Oct. 22	OVMA - PPE for Pesticide Applicators - Seaside	272
Nov. 8	Chemeketa Community College Respiratory Protection for Ag Ops - Salem	22
Nov. 13	OSU Forestry Pesticide Storage & Spills - Roseburg	31
Nov. 19	OSU Pesticide Storage & Spills - Corvallis	85
Dec. 5	OSU Farm Fair PPE in Spanish - Hermiston	20
Jan. 8	OSU Pesticide Storage & Spills - Wilsonville	211
Jan 16	NW Ag Show Pesticide Safety Topics- 8 hours -Salem	44
Jan 17	NW Ag Show Pesticide Safety Topics – 8 hours - Salem	45
Jan. 30	CONNEX Cannabis Conference - Pesticide Regs - PDX	20
Jan.30	OSU Berry growers- AEZ- Clackamas	35
Feb 7	OSU Pesticide Storage, Spill Prevention - Bend	250
Feb 11	OSU Lane Weed Management – Pesticide spills - Eugene	86
Feb 19	Gresham Parks & Recreation – Gresham	36
Feb 19	OSU Urban Horticulture – Oregon City	36
Feb 21	Chemeketa Community College – Respiratory Protection for Wineries - Salem	11
Mar 5	OSU Pesticide Storage & Spill Prevention - LaGrande	35
		<b>1239</b>

**Pesticide Related Interventions – External Training, FY2020**

Classes (Workshop & Internet)	Sessions	Attendees
Hazard Communication – Aligned with GHS (HazCom)	5	47
Worker Protection Standard (WPS)	5	48

*Source: Information Management Division,  
Oregon Department of Consumer and Business Services November 2020*

## Consultative Services FY2020

### Consultations addressing WPS

Industry (NAICS)		Health	Safety
<i>Totals</i>		7	10
Selected NAICS	111421	1	-
	111998	4	-
Other NAICS	111332	1	-
	112990	-	1
	221310	-	2
	441228	-	1
	444130	-	1
	453998	1	-
	519120	-	1
	721310	-	2
	921140	-	1
	922120	-	1

*Source: Information Management Division,  
Oregon Department of Consumer and Business Services, November 2020*

**Public Outreach:** Oregon OSHA tracks publication circulation and video requests. The next few tables show activity for FY2020.

### Oregon OSHA Publications in FY2020

Titles	Number Distributed
Pesticide Use and Your PPE	751
Safe Practices When Working Around Agricultural Chemicals (English/Spanish)	5413
The Air You Breathe: Oregon OSHA's Respiratory Protection Guide for Agricultural Employers	934
Pesticide Worker Protection Standard reference guide	328

### Oregon OSHA Resource Center Pesticide-related Videos, FY2020

	Name	English	Spanish	Requests
95	PESTICIDE SAFETY WORKER PROTECTION STANDARD	X	X	1
170	PESTICIDE HANDLERS AND THE WORKER PROTECTION STANDARD	X	X	1
285	PESTICIDE SAFETY FOR AG WORKERS	X	X	1
169	WORKING SAFELY IN THE GREENHOUSE	X	X	11

*Source: Information Management Division, Oregon Department of Consumer and Business Services, November 2020*

### Oregon OSHA On-Line Pesticide-related Videos, FY 2020

Name	English	Spanish	Views
Application Exclusion Zone Explained	X		234
Application Exclusion Zone Explained (Spanish)		X	234

*Source: Information Management Division, Oregon Department of Consumer and Business Services, November 2020*

## ◆ Oregon Pesticide Symposium—Multi-Agency Annual Meeting:

The annual Oregon Pesticide Symposium normally held in March was canceled due to COVID-19. Due to the on-going Pandemic, and the need to share important information, the 2021 Oregon Pesticide Symposium is slated for a virtual format.

## Conclusions:

The working relationships between Oregon OSHA and the Region 10 Enforcement and Compliance Assurance Division in the Air & Toxics Enforcement Section, formerly known as the EPA Pesticides Unit remains positive and productive. This also includes the cooperative nature between the entire Region 10 partners including the departments of agriculture in Washington, Idaho and Alaska, and the PSEPs in those states. PARC remains a vital connection for communicating and coordinating agency actions related to pesticide exposure incidents.

## ◆ Accomplishments:

- ◆ Provided input into the development and review of the National Non-Soil Fumigation Core Manual in conjunction with the Pesticide Education Resources Collaborative.
- ◆ Provided input and insight to the Pacific Northwest Agriculture Safety and Health Center (PNASH) ideas for upcoming projects, including the changing role of women in agriculture, disinfectant outreach, outreach to cannabis and hemp growers, and increasing collaborative opportunities in the forestry sector. Provided input into the national discussion for PPE shortages for pesticide applicator community during the pandemic.
- ◆ Provided Respiratory Protection training to Pesticide Safety Educators responsible for conducting Hands-on-Handler training workshops for Washington State Department of Agriculture, Idaho Department of Agriculture and PNASH staff.
- ◆ The Agriculture Labor Housing inspection checklist was updated to reflect the Application Exclusion Zone (AEZ).

## ◆ Goals for the coming year:

- ◆ Continue the development of web-based outreach materials for both the Cannabis grow and processing industry with regards to pesticide use.
- ◆ Develop a fact sheet on ways to reduce take home contamination for landscapers. Landscapers who perform pesticide applications have increased opportunities for pesticide exposure due to the lack of decontamination supplies on their vehicles by spraying and moving site to site with the resulting vehicle contamination.
- ◆ Translate the “Information for the Landscaping Profession” booklet into Spanish.
- ◆ Collaborate with the PARC member agencies to develop a comprehensive Oregon specific pesticide storage publication to aide in the design and construction of these facilities.
- ◆ Create a Disinfectant web page to address the specific applicable Oregon OSHA rules that apply, including links to materials developed by the National Pesticide Information Center to aide in the proper use, as well as links to the Oregon Department of Agriculture to ensure proper licensing requirements are met.