

PESTICIDE ANALYTICAL AND RESPONSE CENTER

2017-19 Biennial Legislative Report



[HTTPS://ODA.DIRECT/PARC](https://oda.direct/parc)

About the Pesticide Analytical and Response Center (PARC) Investigation coordination

There are eight member state agencies that comprise PARC: The Oregon Department of Agriculture (ODA); Oregon Department of Environmental Quality (DEQ); Oregon Department of Fish and Wildlife (ODFW); Oregon Department of Forestry (ODF); Oregon Health Authority, Public Health Division (OHA); Oregon Occupational Safety and Health Administration (OR-OSHA); Oregon Office of State Fire Marshal (OSFM); and the Oregon Poison Center (OPC). Several other organizations provide expertise to the PARC Board as contracted consultants: Oregon Institute of Occupational Health Sciences; the Department of Environmental and Molecular Toxicology at Oregon State University (OSU); and Oregon Department of Transportation (ODOT). In addition, there is a position for a citizen from the state at large on the PARC governing board.

PARC is mandated by statute (ORS 634.550) to perform the following activities when pesticide-related incidents result in suspected health or environmental effects:

- Collect incident information;
- Mobilize expertise for investigations;
- Report results of investigations;
- Identify trends and patterns of problems;
- Make recommendations for action including regulatory and public education;
- Prepare activity reports for legislative sessions.

What is a pesticide?

The Federal Insecticide Fungicide Rodenticide Act defines a “pesticide” as “any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest.” Examples include: disinfectants, moss control products, insecticides and herbicides.

A primary statutory function of PARC is to coordinate pesticide-related investigations. PARC collects and analyzes information about reported incidents of health or environmental effects from possible pesticide exposures. As PARC does not have regulatory or investigative authority itself, it relies on these agencies to collect pertinent information. PARC member agencies conduct the investigations and take necessary enforcement actions.

The following report summarizes pesticide incidents documented during the July 1, 2017 to June 30, 2019 biennium and member agencies’ responses on selected incidents. The statistics on the following report reflect PARC cases that are classified as incidents following member agency investigations. Investigations take time, and some investigations which started during the ‘17-19 biennium may not be completed and classified as incidents. Therefore, the statistics regarding the number and types of incidents may be revised at a later date.

Human incidents

From July 1, 2017 through June 30, 2019, OHA reported a total of 129 acute confirmed cases of pesticide poisoning in Oregon, with 46 also PARC incidents. Tables 1 to 3 in the report Appendix provide more details about these cases.

The OHA Pesticide Exposure, Safety, and Tracking (PEST) program identified 12 confirmed cases of pesticide exposure associated with a bed bug treatment to a hotel in Tillamook, which took place while hotel staff and others were in the area. This explains why so many insecticide exposures occurred during fiscal year 2018, as shown in the Appendix. Symptoms associated with this event had more severity than toxicologists expected, including three people who lost consciousness. The OHA PEST program could not determine if the products were somehow adulterated or if this incident suggested the active ingredients were more harmful than previously understood. Oregon OSHA addressed serious violations with the hotel regarding the lack of communication regarding health hazards.

Another incident involved several employees seeking medical care at a hospital for symptoms that occurred when an automated machine malfunctioned and sent contaminated steam to a paper mill floor. Twelve employees sought medical treatment, one of whom was transported by ambulance. The mill responded according to protocols, but this case was significant due to the fact the hospital kept the employees outside in 30-degree weather despite receiving product safety information. After more than 2 hours, the employees went home, showered and upon their return, were allowed inside. The OHA PEST program confirmed 6 cases of pesticide poisoning.

PARC was notified of the incident by the State Fire Marshal after they were invited to participate in an after-action review of the incident. Oregon OSHA and ODA conducted an onsite investigation accompanied by PARC. As a result of the after-action review, the mill and the hospital established protocols for incident management and practicing emergency response events. PARC coordinated a conference call with PARC member agencies to discuss the incident and how to improve the notification process going forward.

This effort involved PARC member agencies working with their local Health and Fire Departments on proper notification procedures. The Office of State Fire Marshal was asked by the hospital emergency management coordinator to facilitate a debrief with many of the parties involved. At that debrief, there were important introductions between key players and discussion about opportunities to improve communication between the facility, emergency responders, the 9-1-1 dispatch center, Oregon Emergency Response System (OERS), and the hospital.

Several weeks later, the hospital hosted a table top exercise involving a scenario similar to the real incident where those communication channels were identified and tested. Through both the debrief and the table top exercise, the community stakeholders have strengthened working relationships and have become more aware of the various roles, authorities, and emergency contacts for each agency involved.

Another incident involved exposure of a high school swim team to chlorine gas at an aquatic swim center. Seventeen of 29 students reported symptoms and 6 of those required treatment from first responders or at area hospitals. OHA PEST confirmed 9 cases. First responders contacted the Office of Emergency Management, who in turn contacted PARC. PARC mobilized ODA, OHA/PEST, OSFM and OR-OSHA. Further investigation, including the OHA Pool Safety Program, determined that equipment failure caused the chlorine gas to form.

Animal incidents

From July 1, 2017, through June 30, 2019, there were a total of 16 PARC incidents involving animals. One notable case involved a discovery that fungicide-treated seed waste containing pesticide products was being fed to cattle. After being alerted to the situation by DEQ, several ODA programs, including ODA's Animal Health program, Fertilizer program, and Pesticides program, collaborated to ensure the waste material was made inaccessible to cattle. In addition, both DEQ and ODA conducted investigations and documented violations of hazardous waste and pesticide laws.

Process improvements

Two pesticide incidents during the 2017-2019 biennium highlighted opportunities for improvement among PARC member agencies in providing information on cleanup options and connecting affected parties early in the process with customer service assistance.

The previously mentioned incident of multiple pesticide exposures which occurred as a result of a bedbug application at a Tillamook hotel, was investigated by ODA, OHA, and OR-OSHA. The ODA investigator followed the usual protocol, and collected numerous environmental samples in and near the treatment area soon after the application. The applicator ventilated the room into a very long hallway during treatment where hotel staff were working. Employees and the fire department all reported a very strong odor of rubbing alcohol. One of the products used contained 60-80 isopropyl alcohol. Oregon OSHA cited serious violations. Over the course of the investigation, it was determined that the type and severity of symptoms were atypical of the active ingredients in the products reportedly applied.

Environmental samples are typically what are initially collected by investigators, in this case eight samples were collected from various locations. A topic of discussion after this incident included the discussion of sampling protocols when there are serious acute symptoms. Discussions included the number of samples collected and the collection of formulation samples.

The second incident occurred as a result of a homeowner making an application of a concentrated, undiluted volatile herbicide to a rural property in southern Oregon; the herbicide damaged a nearby commercial vineyard. ODA investigated the incident and documented violations of Oregon's pesticide laws. There are ongoing discussions regarding additional measures and future responses to similar incidents.

In both incidents, affected parties requested assistance with cleanup of pesticides that were used. While PARC member agencies do not have the authority to initiate and perform

the cleanup of non-bulk quantities of pesticide residues on private property, these incidents highlighted that there is a need to help direct landowners and managers to cleanup resources. PARC staff researched cleanup information for non-bulk quantities of pesticides and identified a helpful resource available from the National Pesticide Information Center (NPIC). ODA updated training and reference materials for staff responding to inquiries about pesticide cleanup to include the NPIC information.

The southern Oregon incident highlighted the need to involve ODA's Citizen Advocate and Liaison as early as possible in the incident investigation process. As a result, ODA's Pesticides Program is now doing just that. The Citizen Advocate reaches out proactively to affected people to serve as a resource and point of contact, while ODA and other PARC member agencies perform the investigation. In large or complex cases, the Citizen Advocate also convenes regular coordination calls between the PARC member agencies involved, and provides regular written updates to affected citizens regarding the investigation status. We believe affected parties are receiving better and more coordinated customer service as a result.

In another incident, the use of an unregistered product (zinc sulfate) to control moss was applied by a roofing company to several homes in the Portland area. Four individuals reported adverse health effects they associated with exposure to the product and referrals were made to OHA/PEST. These applications were made by employees of a company; neither the company nor employees were licensed by ODA to perform pesticide applications. ODA worked with the roofing company to bring awareness to the industry on pesticide laws. The Citizen Advocate provided updates on the investigation to local representatives, and impacted persons, and worked with the property management company to disseminate information to all potentially affected residents.

PARC statistics

2017-19
PARC Report

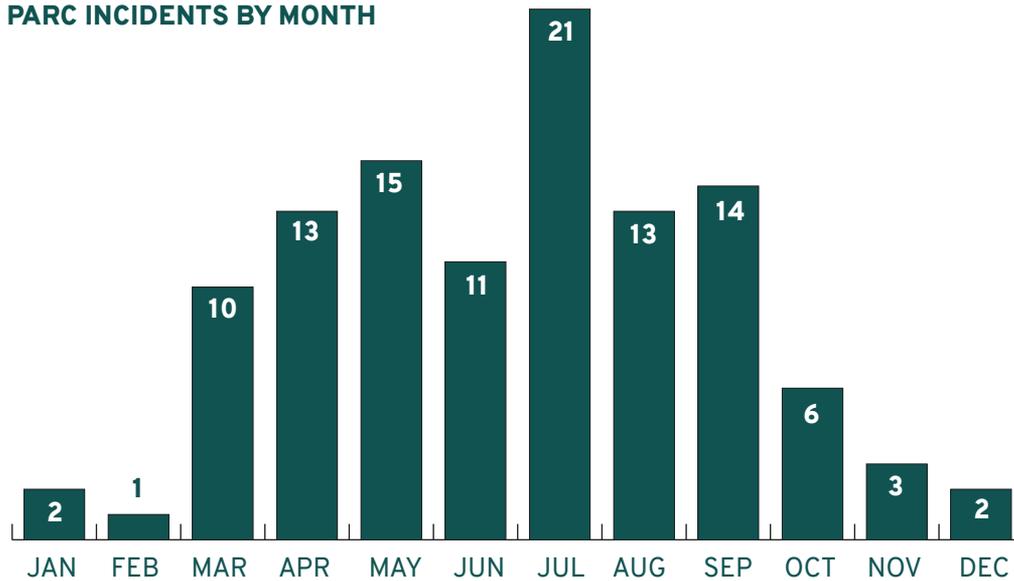
INCIDENTS BY CLASS	
	Number
Human	46
Animal	16
Environment	37
Mixed	2
Total	101

PESTICIDE TYPE	
	Number
Algaecide	4
Avicide	1
Disinfectant	5
Fungicide	10
Herbicide	74
Insect growth regulator	2
Insecticide	26
Miticide	1
Moss Control	2
Plant growth regulator	4
Rodenticide	6

EXPOSURE SITES	
	Number
Agriculture (e.g. farm, nursery)	28
Commercial (e.g. office park, retail)	2
Forestry	3
Hospital	1
Golf course	1
Hotel / motel	1
Mobile home / trailer	1
Multi-unit housing	7
Park / municipal park	3
Total	47

INCIDENT LOCATIONS	
County	17-19
Baker	0
Benton	2
Clackamas	6
Clatsop	2
Columbia	1
Coos	3
Curry	2
Deschutes	2
Douglas	8
Gilliam	0
Grant	0
Harney	0
Hood River	1
Jackson	8
Jefferson	2
Josephine	4
Klamath	1
Lake	0
Lane	5
Lincoln	1
Linn	2
Malheur	0
Marion	13
Morrow	5
Multnomah	18
Out of state	0
Polk	5
Sherman	0
Tillamook	2
Umatilla	3
Union	0
Unknown	2
Wallowa	0
Wasco	0
Washington	6
Wheeler	0
Yamhill	7
Total	111

PARC INCIDENTS BY MONTH



Appendix

TABLE 1: OREGON CONFIRMED CASES¹ OF PESTICIDE POISONING BY SEVERITY 7/1/2017-6/30/2019

	Fatal	High	Moderate	Low	Total
FY 2018 ²	0	0	8	56	64
FY 2019 ³	0	1	18	46	62

TABLE 2: FY 2018² CHEMICALS

Chemical ID / EPA PC Code	Chemical name	Type of pesticide	Frequency of associated confirmed cases
069005	Phenothrin	Insecticide	12
069149	1-Decanaminium, N-decyl-N,N-dimethyl-, chloride	Insecticide	12
118831	Betacyfluthrin	Insecticide	12
129099	Imidacloprid	Insecticide	12
129093	Chlorfenapyr	Insecticide	12

TABLE 3: FY 2019² CHEMICALS

Chemical ID / EPA PC Code	Chemical name	Type of pesticide	Frequency of associated confirmed cases
020501	Chlorine	Disinfectant	12
103601	Glyphosate-isopropylammonium	Herbicide	6
101801	2,2-Dibromo-3-nitrilo-propionamide	Algaecide	6
030063	2,4-D, 2-ethylhexyl ester	Herbicide	6
059101	Chlorpyrifos	Insecticide	5

¹NIOSH guidelines define confirmed pesticide cases as having a certainty of “definite,” “probable” or “possible”

²Report date: 7/1/2017-6/30/2018

³Report date: 7/1/2018-6/30/2019