

OREGON OFFICE OF STATE FIRE MARSHAL

CR2K ANNUAL SUMMARY

2018





Mission

Protecting citizens, their property,
and the environment from fire and
hazardous materials.

Vision

Premier Public Safety Services.

Values

PROFESSIONALISM

We are a highly skilled and
competent workforce.

CREDIBILITY

We demonstrate trust and
accountability through our actions.

COLLABORATION

We partner with others to
achieve our mission.

LEADERSHIP

We are dedicated to an
environment for success.

DEDICATION

We believe our mission
is worthy of our efforts.

Statutory Authority
Oregon Revised Statutes:
Chapters 336, 453, 470,
476, 478, 479, 480



Table of Contents

Introduction.....	2
About the data in this report.....	2
Methodologies.....	3
Community Right To Know	4
Executive Summary.....	4
Hazardous Substance Storage.....	5
Hazardous Substance Incidents.....	12
Regional Hazmat Team	16



INTRODUCTION

About the data in this report

NFIRS - The National Fire Incident Reporting System (NFIRS) was developed by the U.S. Fire Administration and is a uniform system of incident reporting that uses a common set of definitions and associated numerical codes. NFIRS provides general guidance and standards to be used when completing incident reports. Report data is primarily submitted to the OSFM by Oregon's structural fire agencies using the NFIRS format and standards.

Oregon Fire Bridge™/Elite - Oregon's incident reporting system, Oregon Fire Bridge™/Elite, is a real-time reporting system that is web based and NFIRS compliant. Incident reports are required to be submitted to the OSFM under ORS 476.210 and must be compliant with the current NFIRS incident reporting standard. Incident reports are submitted to the OSFM from fire agencies in Oregon and are maintained in the OSFM fire data repositories. Data entered into the Oregon Fire Bridge™/Elite by local fire agencies can be changed, modified, or updated at any time as newer information becomes available. Data that was not reported in previous years may also be entered at any time. These variables may cause information previously reported by OSFM to vary from what is currently reported.

Statewide Incident Summary - The data in this section was obtained from the Elite records management system and includes every type of incident reported, not just fire incidents. The data in this section includes only incidents reported to the OSFM on or before March 31, 2019.

Fires in Oregon - The data in this section was obtained from Elite records management system and includes only incidents that involved an actual fire. The data in this section includes only incidents reported to the OSFM on or before March 31, 2019.

Community Right To Know Report - The Community Right to Know and Protection Act was passed by the Oregon Legislature in 1985 (ORS 453.307 to ORS 453.520). Oregon's Community Right to Know (CR2K) program is administered by the Oregon Office of State Fire Marshal (OSFM), and meets or exceeds certain requirements of the federal Emergency Planning and Community Right to Know Act. The law requires the OSFM to survey facilities annually in order to collect, validate, and disseminate information on hazardous substances located throughout the state. This supplemental report summarizes the information reported by facilities on the Hazardous Substance Information Survey.

Certain hazardous substance incidents are required to be reported to the OSFM under ORS 453.342. The Oregon Fire Bridge™/Elite system is the online database the OSFM makes available for fire agencies to enter hazardous substance incidents. A snapshot of the hazardous substance incidents that occurred in 2018 was taken on March 31, 2019, for the purpose of summarizing the information reported by first responders.

Reporting Agencies - In order to provide a more complete summary of the fire situation in Oregon, the data in this report includes information provided by fire agencies recognized by the OSFM, including those that are not required to report their incident data to OSFM.

Methodologies

Aid Given - To isolate individual fire incidents, only reports from the primary agencies are included. Excluded from this report are any incidents where agencies reported that mutual or automatic aid was given except where aid given totals are specifically identified.

Casualties - Information on fire service and civilian casualties in this report is based on data provided in either the NFIRS Fire Service Casualty Module or the Civilian Fire Casualty Module. Casualty data entered only in the NFIRS Basic Module was not included.

Estimated Loss Amounts - Dollar amounts listed in this report are estimates made by on-scene firefighters and are not actual insurance totals. Methodologies for determining estimated loss amount and pre-loss amounts are established independently by each local fire agency.

Note: Totals in the following charts and graphs may not add up to 100 percent due to rounding.



COMMUNITY RIGHT TO KNOW

Executive Summary

The Oregon Community Right to Know and Protection Act (ORS 453.307 to ORS 453.520) requires facilities that possess certain quantities of hazardous substances to submit an annual report to the Oregon Office of State Fire Marshal (OSFM), Community Right to Know (CR2K) program. This law also requires emergency responders to report to OSFM incidents involving the release, or threatened release, of hazardous substances.

The federal Emergency Planning and Community Right to Know Act (EPCRA Section 312) requires certain facilities to report hazardous substance information to the State Emergency Response Commission (SERC), Local Emergency Planning Committees (LEPC), and local fire agencies. In Oregon, the State Fire Marshal is designated as the SERC, and this reporting requirement is accomplished by submitting hazardous substance information to OSFM's Community Right to Know program (CR2K).

Beginning January 1, 2018, hazardous substance reporting migrated from a paper process to an online program. Reporting facilities are now able to log into the Community Right to Know Hazardous Substance Manager (CHS Manager) and submit the required information. Emergency planners, responders, and the public are also able to use CHS Manager to view submitted information.

As required by law, reporting facilities submit demographic information and hazardous substance details for chemicals on site that meet reportable quantity thresholds. A hazardous substance is defined as a substance for which the Oregon Occupational Safety and Health Administration (OR OSHA) requires the manufacturer to develop a Safety Data Sheet.

The reportable quantity thresholds for most substances are:

- 500 pounds of a solid
- 500 gallons of a liquid
- 500 cubic feet of a vaporous gas
- 500 gallons of a liquefied or cryogenic gas

For highly toxic substances or explosives, the thresholds are:

- 5 gallons of a liquid
- 10 pounds of a solid
- 20 cubic feet of a gas

Extremely Hazardous Substances (EHS) designated by the Environmental Protection Agency are reportable at the specific threshold planning quantity established for each substance. Radioactive substances that are not within a sealed source are reportable at any quantity (OAR 837-085-0070 (2)(a)).

The reportable quantity threshold for gasoline and diesel in underground storage tanks at retail gasoline service stations is 75,000 gallons and 100,000 gallons respectively.

The submitted data is frequently validated to ensure it is correct for those who rely upon it. Types of validation include reviewing submitted reports and calling facilities for clarification, electronic validation through scheduled control queries, and conducting in-person and phone audits to confirm and assist with compliance. A hazardous substance information hotline is available to facilities for assistance with submitting required data.

The public has access to most information at individual facilities, and information about hazardous substance incidents. Information is also accessible by the Oregon's SERC, LEPCs, fire agencies, regional Hazmat teams, county and local emergency planners, county health administrators, Public Safety Answering Points (PSAP 911 call centers), and local and state agencies. The data helps these partners make informed decisions about how to protect life, property, and the environment from hazardous materials incidents.

For more information, please visit our CR2K website or call the Hazardous Substance Information Hotline at 503-378-6835 or 1-800-454-6125. To request or obtain hazardous submit information collected by CR2K, please visit <https://www.oregon.gov/osp/programs/sfm/Pages/OSFM-Reports.aspx>, email sfm.cr2k@state.or.us, or call 503-934-8353.

Hazardous Substance Storage

FACILITIES REPORTING

Reporting Frequency by North American Industry Classification System (NAICS) Codes

This table lists the top ten specific industry classifications with the most facilities that were required to report in 2018.

NAICS Code	NAICS Description	Facilities
517312	Wireless Telecommunications Carriers (except Satellite)	2,145
921190	Other General Government Support	923
221122	Electric Power Distribution	364
517311	Wired Telecommunications Carriers	655
611110	Elementary and Secondary Schools	281
424710	Petroleum Bulk Stations and Terminals	266
441310	Automotive Parts and Accessories Stores	238
447110	Gasoline Stations with Convenience Stores	197
811111	General Automotive Repair	185
441110	New Car Dealers	141

Hazard Class Reporting Frequency

Facilities reporting substances to CR2K must also report the physical and health hazards associated with the substance. The hazards used for reporting are those adopted by the U.S. Environmental Protection Agency (EPA) from the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard (HCS) (29 CFR 1910.1200). Several custom codes used only by the Oregon Community Right to Know program are also used. Facilities must identify all applicable hazards utilizing the substance's safety data sheet (SDS). Many substances have multiple hazards.

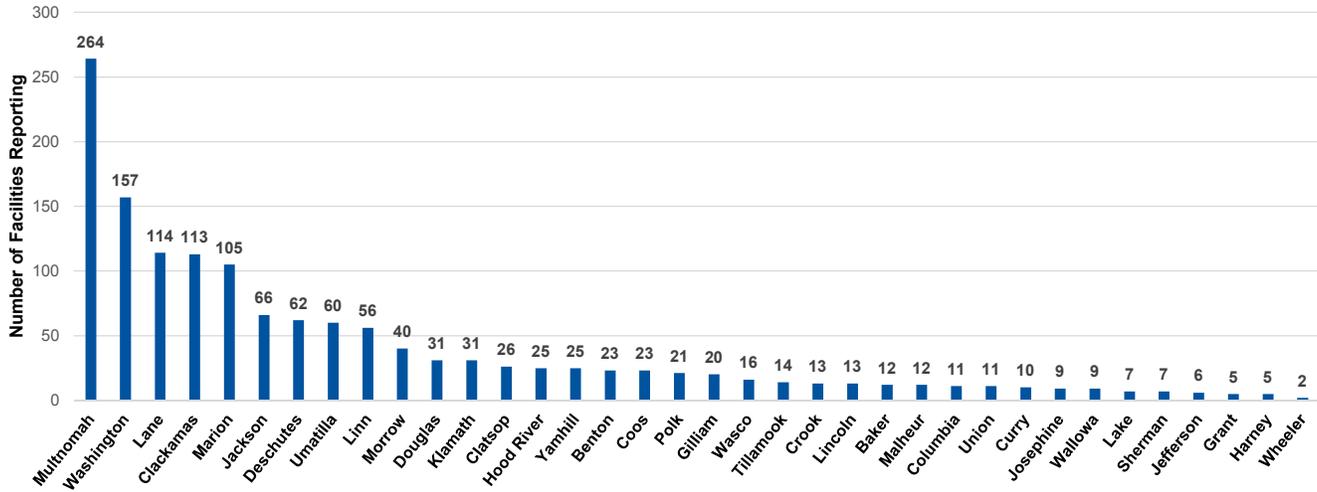
This table shows how many times each hazard was reported for the 2018 reporting period.

Hazard Class Description	Number of Times Hazard Class Reported
Skin corrosion or irritation	7,562
Serious Eye Damage or Eye Irritation	7,210
Acute Toxicity	6,168
Flammable	5,923
Carcinogenicity	5,661
Respiratory or Skin Sensitization	5,443
Specific Target Organ Toxicity	5,147
Reproductive Toxicity	4,621
Aspiration Hazard	4,342
Explosive	4,139
Corrosive to Metal	3,896
Gas under Pressure	3,423

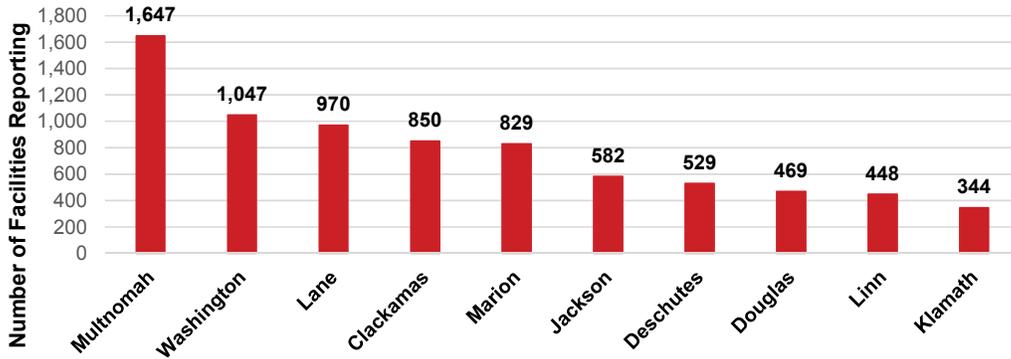
Hazard Class Description	Number of Times Hazard Class Reported
Germ cell Mutagenicity	2,479
Simple Asphyxiant	1,623
Oxidizer	1,472
Health - Hazard Not Otherwise Classified	1,458
Physical - Hazard Not Otherwise Classified	1,285
Poisonous Material	495
Poisonous Gas	492
Combustible Dust	474
In contact with water emits flammable gas	178
Radioactive	80
Pyrophoric (Liquid or Solid)	79
Self-reactive	62
Pyrophoric Gas	54
Infectious or Etiologic (Biological Hazard)	53
Organic Peroxide	48
Self-heating	42



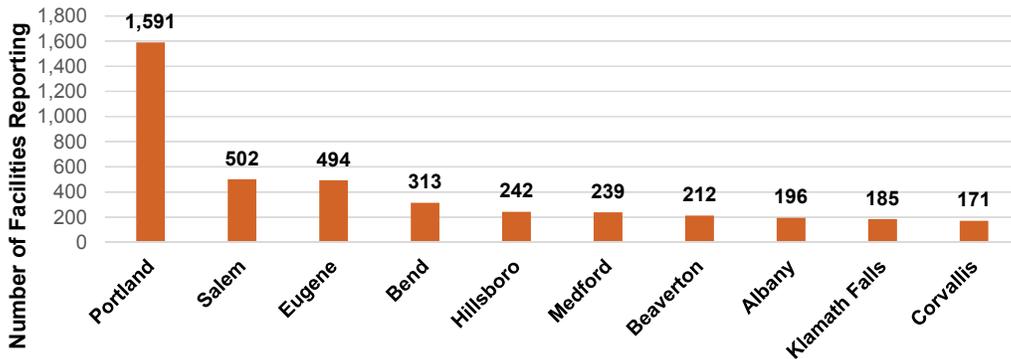
Facilities Reporting an Extremely Hazardous Substance (EHS) at the Threshold Planning Quantity (TPQ) by County



Top Ten Counties with the Most Facilities Reporting



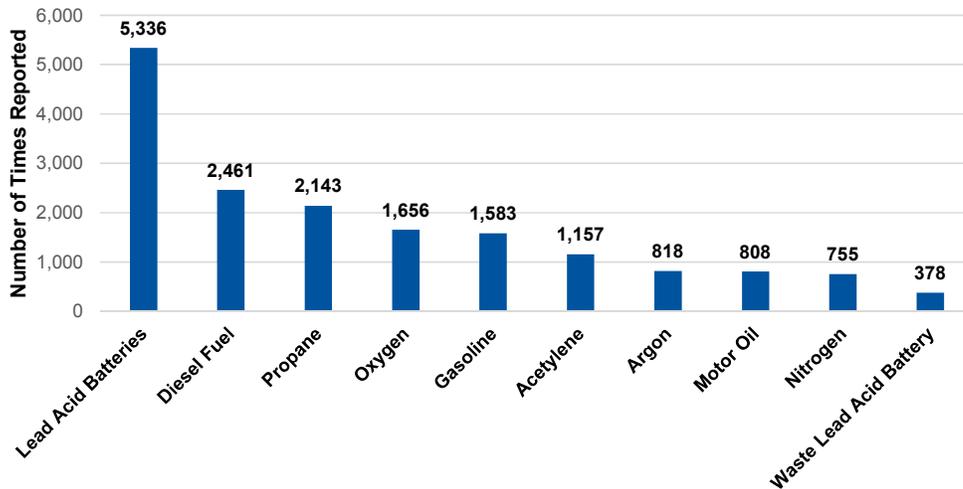
Top Ten Cities with the Most Facilities Reporting



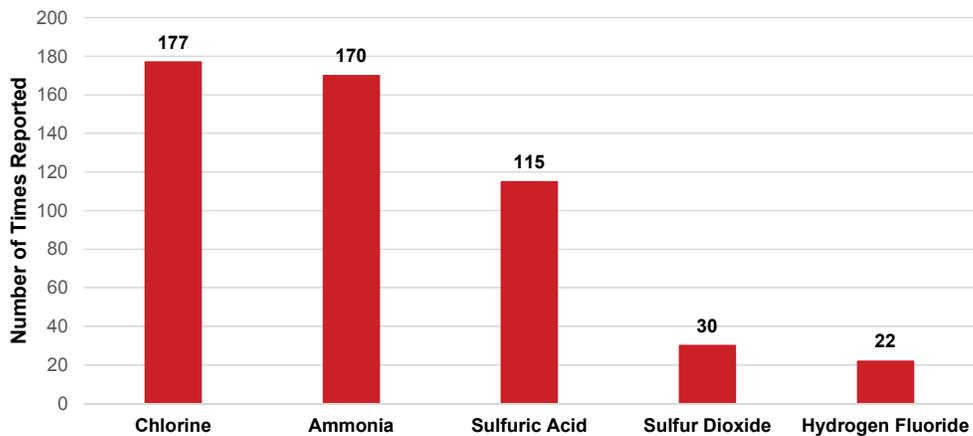
SUBSTANCES REPORTED

The chart below shows the top ten substances most frequently reported. In many cases, substances reported using various names have been combined under one name in this chart. For example, Diesel, Diesel 2, Diesel Fuel 2 Ultra Low Sulfur, and Diesel Oil were combined as Diesel Fuel.

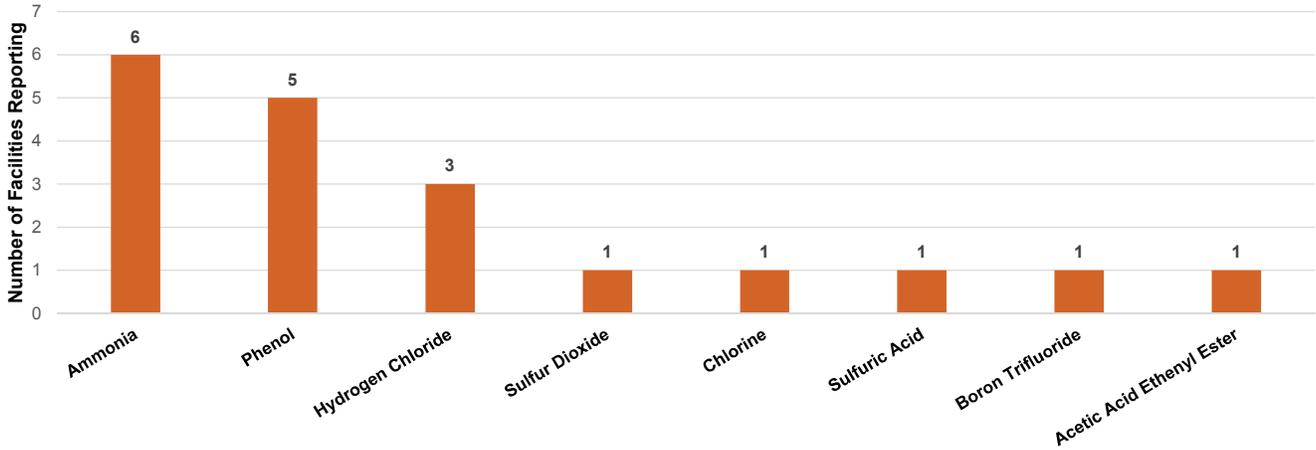
Top Ten Most Frequently Reported Substances



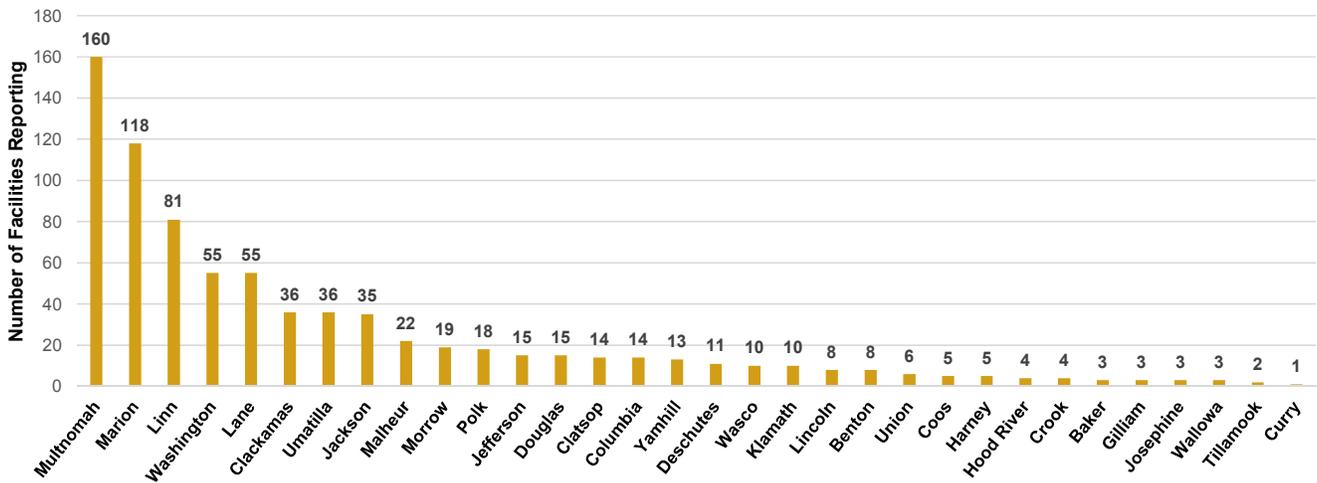
Top Five Most Frequently Reported Pure Extremely Hazardous Substances (EHS)



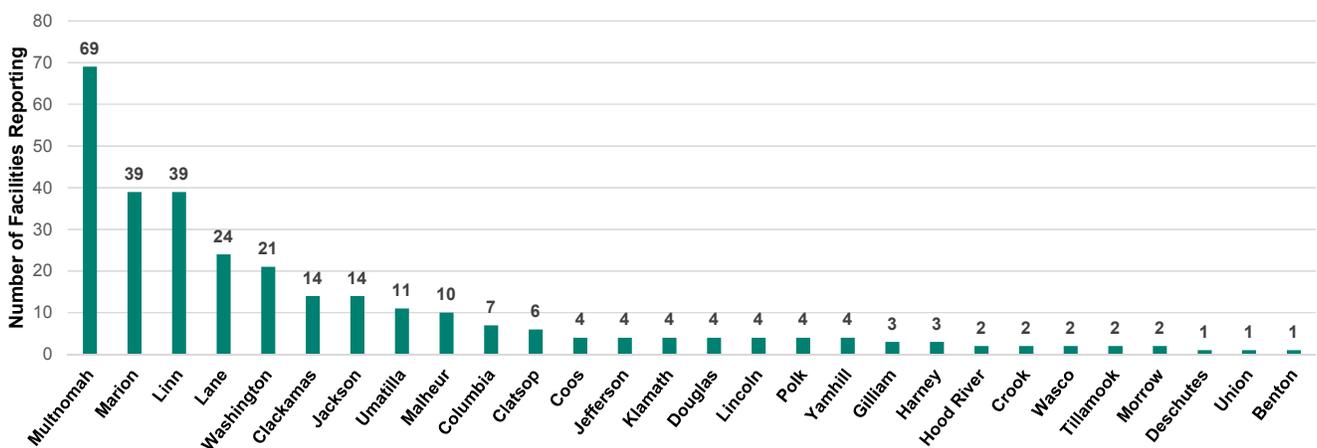
Pure Extremely Hazardous Substances (EHS) Reported over 100,000 Units



Substances Reported in Quantities Over 250,000 Units - by County



Substances Reported in Quantities Over One Million Units - by County



This chart below shows the substances that were reported in quantities exceeding 1,000,000 pounds, gallons, or cubic feet, and the number of times reported.

Count of facilities reporting mixtures in quantities over 1 Million units by name as reported by the facility – may contain duplicates because of the use of a different name for the same substance.

Chemical Name	Count
GASOLINE	9
LEAD ACID BATTERIES	9
FERTILIZER UREA	8
FERTILIZER 11-52-0	7
PORTLAND CEMENT	5
DIESEL FUEL	4
ASPHALT LIQUID	4
FERTILIZER 46-0-0	3
FERTILIZER 21-0-0 AMMONIUM SULFATE	3
FERTILIZER 20-0-0-24	3
FERTILIZER AMMONIUM SULFATE	3
SAND	3
FERTILIZER 0-0-60	3
FERTILIZER MURIATE OF POTASH	3
DIESEL	3
JET A FUEL	3
WOOD DUST	3
UREA	3
ALCOHOL DENATURED FUEL GRADE	3
ALUMINUM INGOTS	3
FERTILIZER 16-20-0-13	2
LEAD ACID BATTERIES-DRY	2
BIODIESEL B5	2
ASPHALT	2
GROUND LIMESTONE	2
DIESEL FUEL 2 LOW SULFUR	2
FERTILIZER SUL PO MAG	2
FERTILIZER 11-52-0 WILCO	2
GREEN LIQUOR	2
NATURAL GAS	2
ETHANOL	2

Chemical Name	Count
AMMONIUM SULFATE	2
PEAT MOSS	2
POLYVINYL CHLORIDE RESIN	2
WHEAT	2
STEEL ALLOYS	2
WHITE LIQUOR	2
FERTILIZER 0-0-39-14S	1
AMMONIUM POLYPHOSPHATE	1
FERTILIZER 21-0-0-24	1
FERTILIZER AMIDAS	1
FERTILIZER 10-34-0	1
ASPHALT CEMENT	1
FERTILIZER 0-0-50	1
FERTILIZER 16-20-0	1
DIATOMACEOUS EARTH	1
BLACK LIQUOR	1
BNZ AGGREGATES	1
BROWN SUGAR	1
CALCIUM HYDROXIDE (LIME)	1
CEMENT	1
CEMENT KILN DUST	1
COKE	1
BIODIESEL	1
FERTILIZER 0-0-21 K-MAG	1
DENATURED ETHANOL	1
ASPHALT EMULSION	1
GARDEN COMPOST	1
AVIATION GASOLINE	1
DIESEL FUEL 2 ULTRA LOW SULFUR	1
DIESEL OIL	1
DOLOMITE LIME	1
DURATION	1

Chemical Name	Count
E-AM-368	1
DIESEL 2	1
CORN FLOUR	1
SODA ASH	1
FOUL CONDENSATE	1
MONOAMMONIUM PHOSPHATE FERTILIZER	1
MOTOR OIL	1
NIOBIUM BASE ALLOYS	1
ORGANIC BASE BLEND	1
PUMICE	1
PVC SUSPENSION RESIN	1
RESIN COATED SILICA SAND	1
RESIN IMPREGNATED PAPER	1
ROOFING GRANULES	1
METAL ALLOYS	1
SCRAP METAL-RECYCLE TITANIUM-PCC	1
MEDIUM DENSITY FIBERBOARD	1
TI 6-4 AERO	1
TITANIUM BASE ALLOYS (SOLIDS)	1
TITANIUM INGOTS	1
TITANIUM/TITANIUM ALLOY SPONGE AND CHIPS	1
TRANSMIX	1
UREA AMMONIUM NITRATE SOLUTION	1
USED OIL	1
WASTE OIL	1
WASTEWATER TMT SLUDGE	1
WEAKWASH	1
SCRAP METAL - RECYCLE	1
HIGH IRON-IRON SAND	1

Chemical Name	Count
FERTILIZER URAN 32-0-0	1
FERTILIZER XCU POLYMER COATED	1
FLY ASH	1
FLY ASH CLASS C	1
FORMALDEHYDE SOLUTION	1
3M BRAND ROOFING GRANULES	1
GARDEN BLEND	1
ZIRCONIUM BASE ALLOYS	1
GRAIN DUST	1
GREEN DIAMOND SAND	1
MICROESSENTIALS SZ	1
HIGH DENSITY POLYETHYLENE	1
FERTILIZER UN-32/NS-1	1
KINGSFORD CHARCOAL BRIQUETS	1
KINGSFORD MATCHLIGHT BRIQUETS	1
KMG-B PENTA BLOCK	1
LEAD ALLOYS AND SCRAP	1
LIME SLUDGE	1
LIMESTONE	1
LIMESTONE PELLETIZED	1
LIQUOR BLACK WEAK	1
LIQUOR GREEN	1
LIQUOR WHITE	1
GREEN WASTE	1

Hazardous Substance Incidents

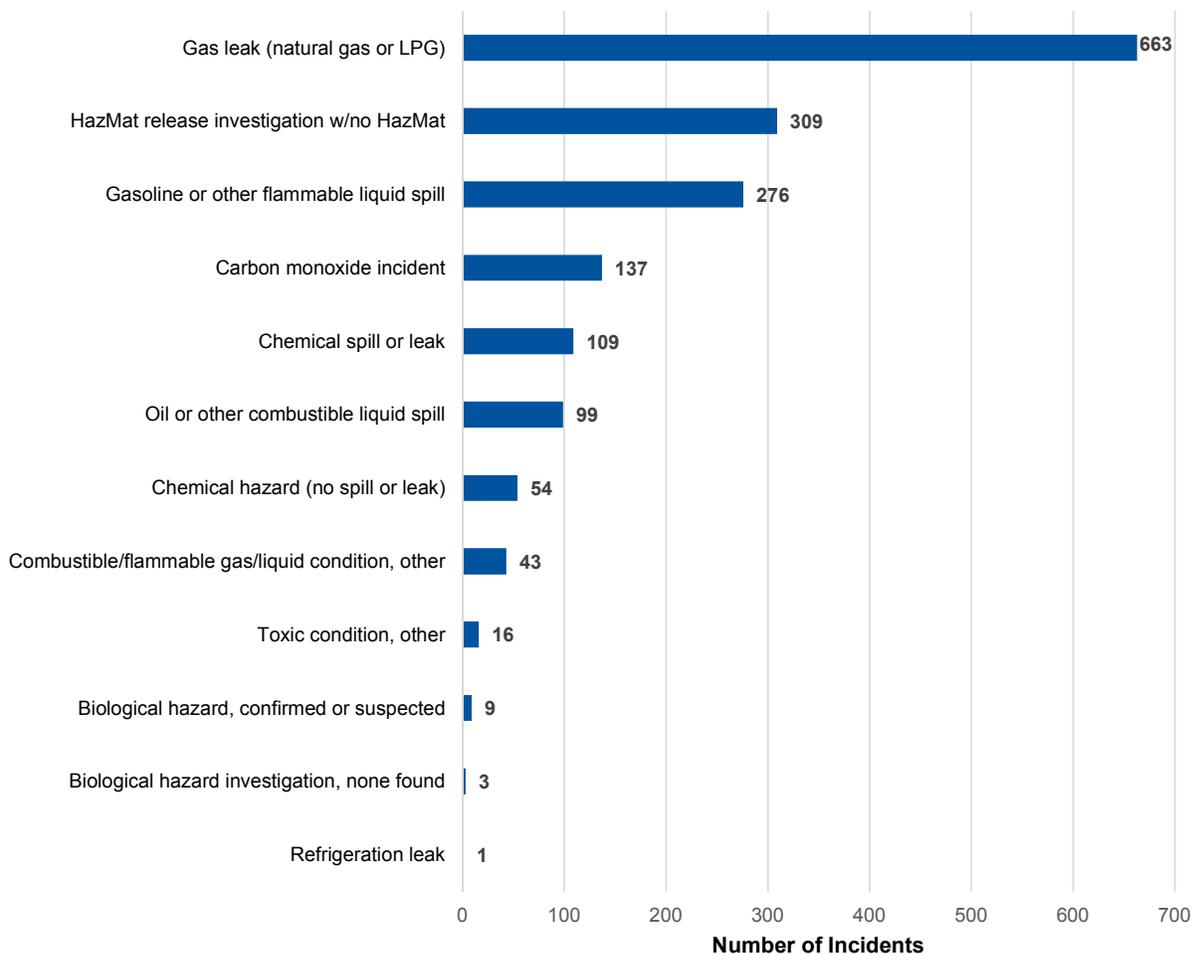
INCIDENT COUNTS

Under the Oregon Community Right to Know and Protection Act, those who responded to an incident involving hazardous substances must report information about that incident to the OSFM. The OSFM currently provides responders with an online incident reporting system.

Fire agencies and OSFM Hazmat teams reported 1,633 hazardous substance incidents in 2018. **These incidents resulted in 1 civilian injury, 1 civilian death, and 1 fire service injury.**

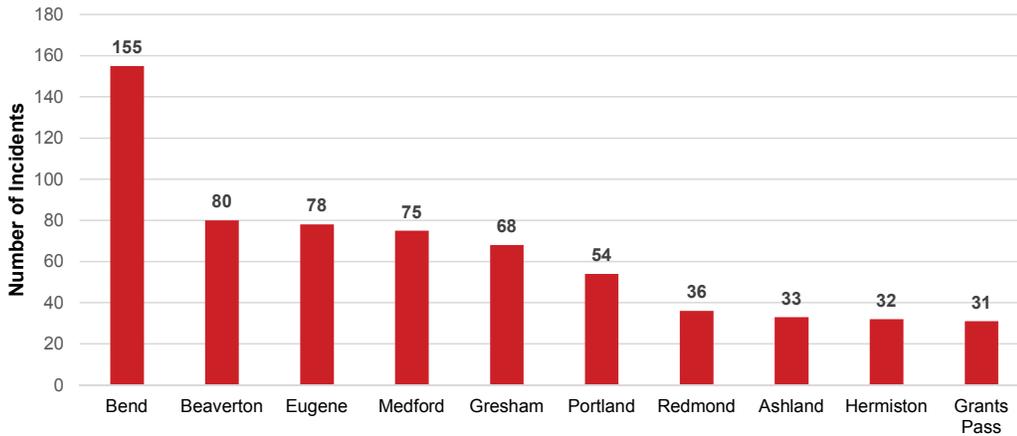
This section presents several snapshot views of hazardous substance incidents in Oregon. More information can be requested by contacting the CR2K Information Assistant at 503-934-8353, emailing sfm.cr2k@state.or.us, or from our website at <https://www.oregon.gov/osp/programs/sfm/Pages/OSFM-Reports.aspx>.

Types of Hazardous Substance Incidents



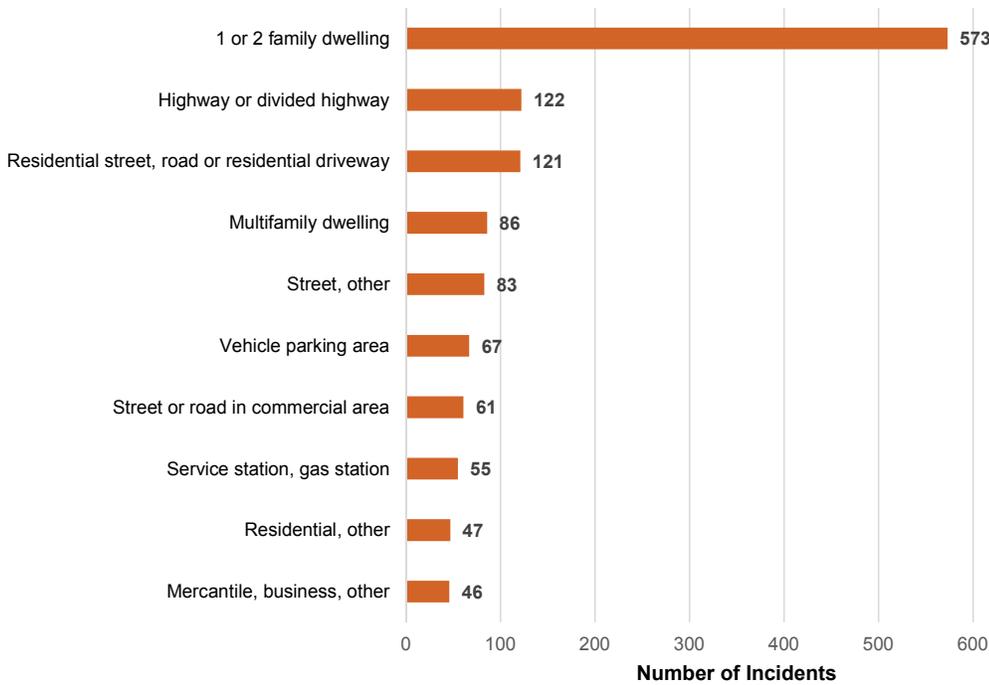
Incident reporters categorize hazmat incidents in one of several broad categories. These categories describe the general types of responses to incidents.

Cities with the Most Reported Hazardous Substance Incidents



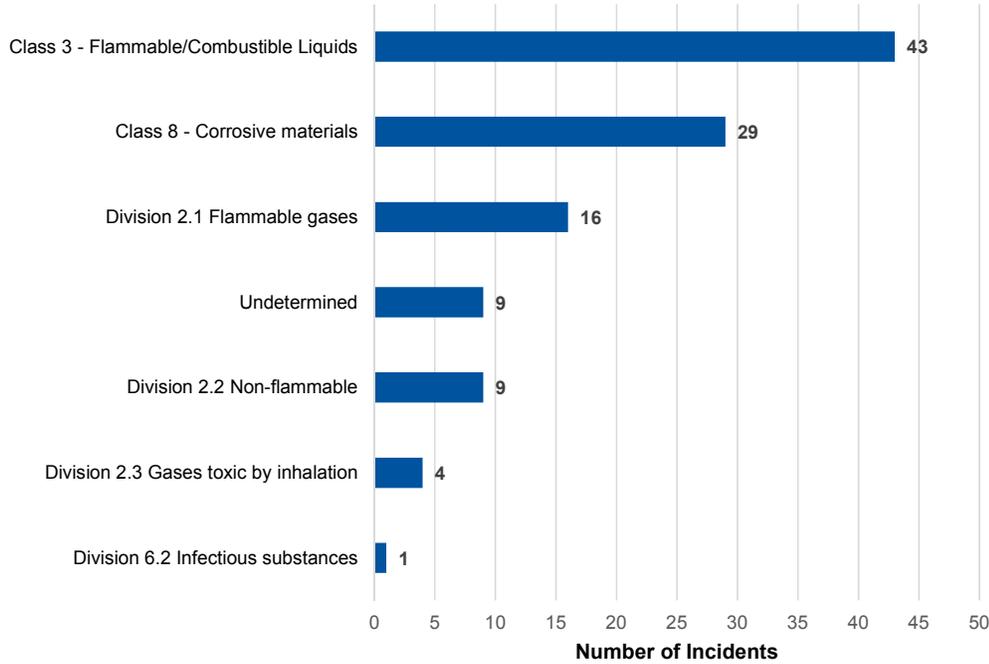
This chart shows the top ten cities with the highest number of hazardous substance incidents reported. The cities listed in this graph are based on the zip code of the address in which the incident occurred, and may not necessarily be within the city limits.

Types of Property Uses Where Hazardous Substance Incidents Occurred



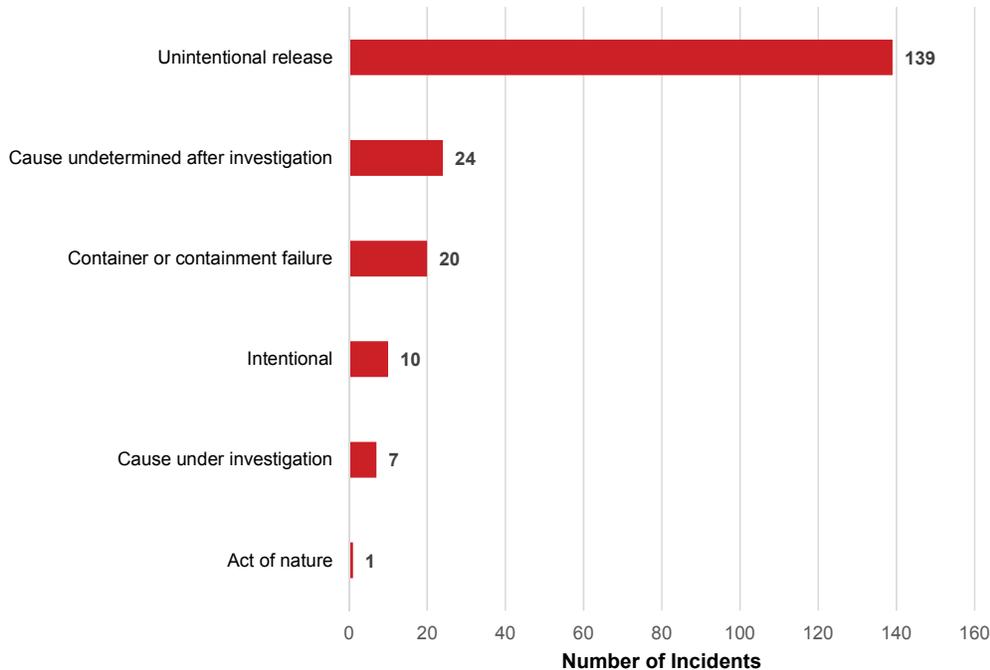
This chart shows the ten types of property uses where the most reported hazardous substance incidents took place. This is a count only and does not reflect the severity of the incidents.

Count of Hazardous Substance Incidents by U.S. DOT Hazard Classes



This chart was derived from reported incidents. The hazard classes of the substances involved were not always clearly stated by the responder reports. Of the 1,633 hazardous substance incidents reported, only 111 are identifiable by the hazard class.

Causes of Hazardous Substance Incidents

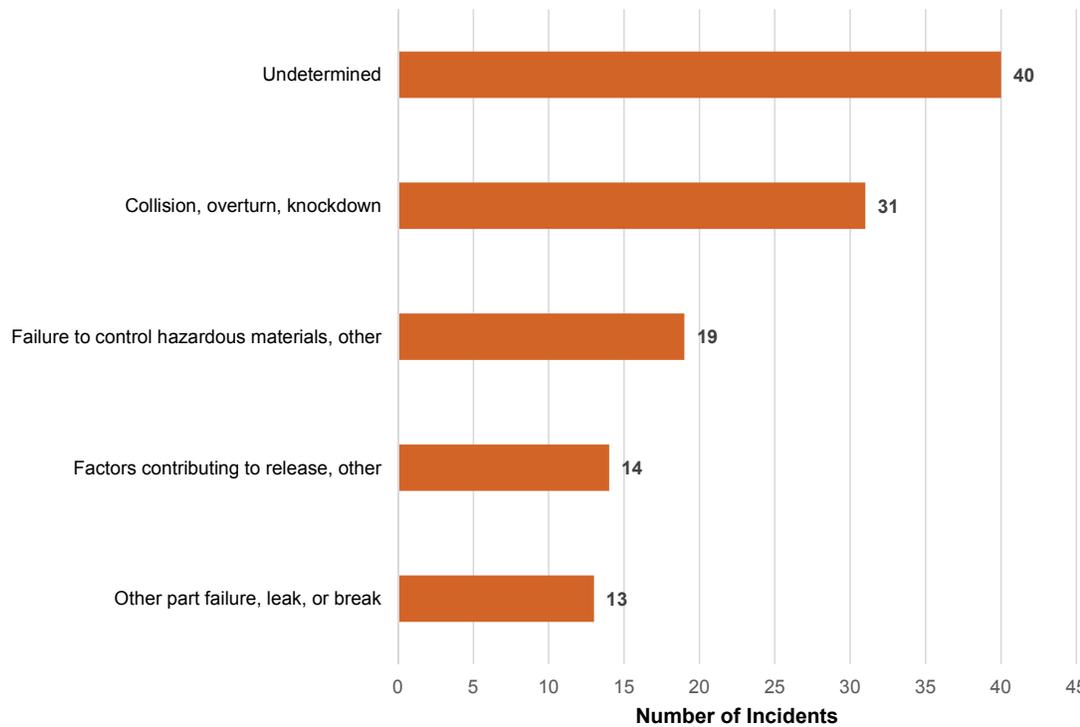


Several options are given for causes of a hazardous substance incident. Not all reports list the cause of an incident. This chart illustrates the reported causes.



REGIONAL HAZMAT TEAM

The following is a brief description of the incidents reflected in these reported casualties:
Factors Contributing to Hazardous Substance Incidents



Several options are given for contributing factors to a hazardous substance incident. Not all reports list a contributing factor. This chart lists the reported contributing factors.

This chart shows the reported casualties associated with hazardous substance incidents in 2018. They are categorized by fire service personnel and civilian. They are further separated based on whether the injury or death

	Injuries - Exposure	Deaths - Exposure	Injuries - Other	Deaths - Other	Total
Civilian	0	0	1	1	2
Fire service	0	0	1	0	1
Total	0	0	2	1	3

was caused by the hazardous substance, or by some other factor in the incident.

- Incident 1 1 fire service member was injured responding to a hazardous material release.
- Incident 2 1 civilian was injured due to exposure to a hazardous substance.
- Incident 3 1 civilian was killed in a hazmat related incident.

1 building and 10 people were evacuated in these incidents.

Oregon Regional Hazmat Team Responses

Hazmat Teams Responding to Incidents

Oregon's 13 Regional Hazmat Emergency Response Teams responded to 63 incidents in 2018.

The following table shows the number of responses for each team. A map of the Regional Hazmat Emergency

Team	Number of Incidents	Team	Number of Incidents		
Team 1	Roseburg	1	Team 9	Tualatin	13
Team 2	Eugene	7	Team 10	Hermiston	13
Team 3	Gresham/Multnomah Co.	5	Team 11	Astoria	3
Team 4	Klamath/Lake	1	Team 13	Salem	3
Team 5	Linn/Benton	1	Team 14	Ontario	2
Team 7	Portland	10	Team 15	Coos Bay	1
Team 8	Southern Oregon	3	Total		63

Response Team boundaries is on the following page.

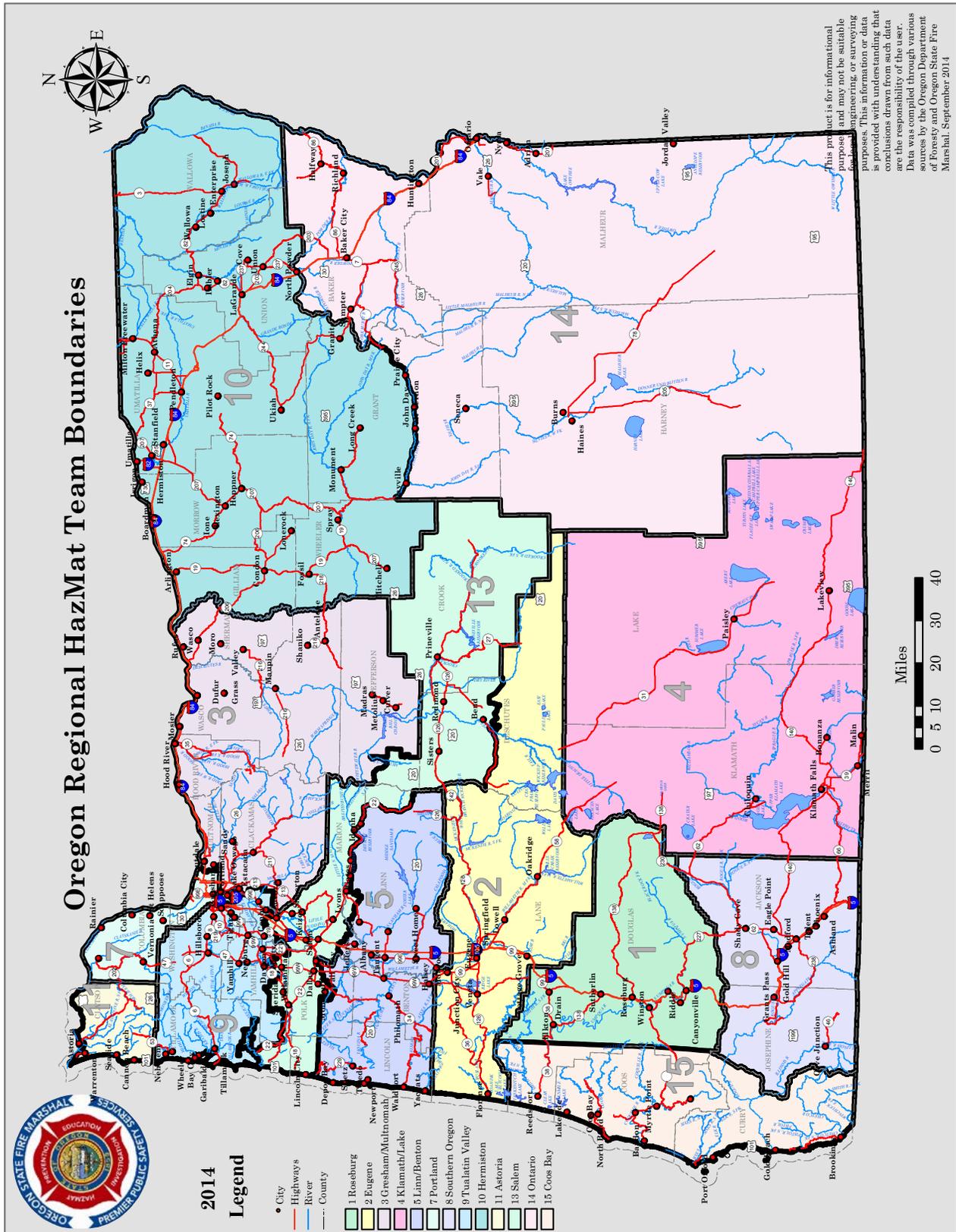
Substances Involved in Hazmat Team Responses

Of the 63 incidents responded to by a Regional Hazmat Emergency Response Team, a total of 26 different

Substance Name	Substance Name
Ammonia solution	Hydrochloric acid
Ammonia, anhydrous	Mercury
Ammonium nitrate	Mineral oil
Boric acid	Muriatic acid
Carbon monoxide	Nitrogen liquid
Caustic soda	Petroleum
Citric acid	Phosphorus (amorphous, red)
Diesel	Polypropylene glycol
Diesel fuel	Propane
Ethylene glycol	Sodium hypochlorite
Ferrous sulfate	Toluene
Fluorine(compressed gas)	Zirconium nitrate
Gasoline	Zirconium tetrachloride

substances were involved.

Oregon Regional Hazmat Team Boundaries Map



Oregon Regional Hazmat Team Outreach

Responses

In 2018, Oregon Regional Hazmat Emergency Response Teams conducted 45 outreach events and training sessions for 1,527 students across the state. Most training was conducted at local fire agencies within the response regions, and often included representatives from industries within the region. Outreach training conducted by the Hazmat teams ensures local responders are prepared to respond quickly and safely, and assist the Hazmat team in the event of a hazardous substance incident. The table below identifies the number of outreach events conducted by each team.

2018 Regional HazMat Outreach

Team #		Events	Student Counts
Team 1	Roseburg	4	76
Team 2	Eugene	2	50
Team 3	Gresham/Multnomah Co.	4	108
Team 4	Klamath/Lake	1	8
Team 5	Linn/Benton	3	63
Team 7	Portland	2	31
Team 8	Southern Oregon	2	95
Team 9	Tualatin	5	71
Team 10	Hermiston	5	67
Team 11	Astoria	6	119
Team 13	Salem	5	111
Team 14	Ontario	2	32
Team 15	Coos Bay	3	455
	OSFM	1	241
Total		45	1,527



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oregon.gov/osp/programs/sfm/Pages/Community-Right-To-Know.aspx

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This publication contains information about the activities and resources of Oregon's structural fire protection agencies in 2018. While this information is published primarily as a service to fire protection agencies, we hope it will be a useful resource for any agency or individual seeking information on Oregon's fire service.



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