

**OREGON  
OFFICE OF STATE FIRE MARSHAL**

**2018 ANNUAL REPORT ON  
HB 3225**



**Prepared for the 2019  
Oregon State Legislative Assembly  
February 1, 2019**



## Table of Contents

<b>Executive Summary &amp; Legislative Overview . . . . .</b>	<b>1</b>
<b>2018 Accomplishments. . . . .</b>	<b>1</b>
Rule Making. . . . .	1
Emergency Planning . . . . .	1
Training and Community Outreach. . . . .	2
Resource Coordination and Information Sharing . . . . .	2
<b>Emergency Planning . . . . .</b>	<b>3</b>
Hazmat by Rail Emergency Plan . . . . .	3
Local HAZMAT by Rail Emergency Plans . . . . .	4
Railroad Reporting Mandates . . . . .	6
Access to Railcar Information . . . . .	6
<b>Training and Community Outreach . . . . .</b>	<b>7</b>
2018 Training Accomplishments . . . . .	7
OSFM Facilitated Training Courses 2018 . . . . .	8
Retired Railcars Installed for Training . . . . .	9
Tabletops and Community Forums. . . . .	10
<b>Resource Coordination . . . . .</b>	<b>12</b>
Oregon Firefighting Foam Trailers . . . . .	12
Information Sharing. . . . .	12
Inter-Agency Collaboration. . . . .	13
<b>Moving Forward . . . . .</b>	<b>14</b>
Additional Tabletop Exercises. . . . .	14
Full-Scale Exercise. . . . .	14

## Executive Summary

### Legislative Overview

Governor Kate Brown signed HB 3225 into law on July 20, 2015, making it part of Oregon Revised Statute 453.307 to 453.414 relating to the safe transport of hazardous materials. The law provides for the Office of State Fire Marshal (OSFM) to coordinate training, preparedness, and response planning activities with a specific focus on oil or hazardous materials spills or releases that occur during rail transport. In part, this law mandates the OSFM to adopt by rule, a plan for the coordinated response to oil or hazardous materials spills or releases that occur during rail transport, identify response resources (existing and needed), and to coordinate training for emergency responders.

## 2018 Accomplishments

### Rule Making

- HB 3225 rules became effective as Division 120 OAR 837-120-0501 through -0540 on February 1st, 2017 and were reviewed by a stakeholder group November of 2018.

### Emergency Planning

- OSFM finalized a Hazardous Material Transportation by Rail State Agency Response Coordination Plan. This plan is an Appendix within Emergency Support Function (ESF) 10, in the Oregon Emergency Operations Plan (EOP).
- OSFM's Hazmat Rail Program provided funding opportunities to eight Local Emergency Planning Committees (LEPCs) across the state to develop comprehensive Hazmat by Rail Emergency Response Plans. At this time, all eight have been completed and are currently in operation.
- As mandated by the U.S. DOT Emergency Order Docket No. DOT-OST-2014-0067, rail carriers transporting in excess of 1,000,000 gallons of Bakken crude oil continue to be required to notify the Oregon State Emergency Response Commission (SERC). The last updated report was provided by BNSF Railroad on June 1st, 2018 which added Multnomah County as an area where Crude Oil will now be transported through. This information is disseminated and made available to appropriate emergency management and response agencies for planning purposes.
- The OSFM continues to promote the use of the AskRail mobile application to Oregon's network of emergency officials, responders, and planners to increase its use.

## Training and Community Outreach

- In 2018, the OSFM facilitated the delivery of several Hazmat Emergency Response on Operations courses.
  - Over 2,000 personnel training hours were delivered.
  - Multiple disciplines attended these trainings, including firefighters, Hazmat technicians, emergency planners, executive level managers, and public officials, along with other Hazmat by rail first responders.
  - Due to this diverse group's attendance, they will collectively have a better understanding in preparing for, and responding to, Hazmat by rail incidents as a unified front.
- The OSFM took delivery of and funded the installation of one retired railroad tank car in Hermiston, donated by BNSF, for use as a training prop.
- Throughout 2018, OSFM staff participated in and facilitated a number of table-top exercises and community forums to discuss planning and response strategies. These exercises and discussions revolved around Hazmat by rail incidents.

## Resource Coordination and Information Sharing

- The OSFM continues to maintain the deployment of eight foam firefighting trailers that have been strategically positioned throughout Oregon along mainline tracks where crude oil or other High Hazard Flammable Trains (HHFT) predominately travel.
- As HB 3225 seeks an inventory of all emergency response resources available, the OSFM continues to upload many of these assets into the online Worldwide Regional Resource List (WRRL).
- The OSFM continues to partner with ODOT Rail and Public Transit Division to give first responders and emergency planners access to a secure web-based information sharing platform – known as GovSpace – that details types and quantities of hazardous materials transported by rail on a quarterly basis through specific geographic areas.

## Emergency Planning

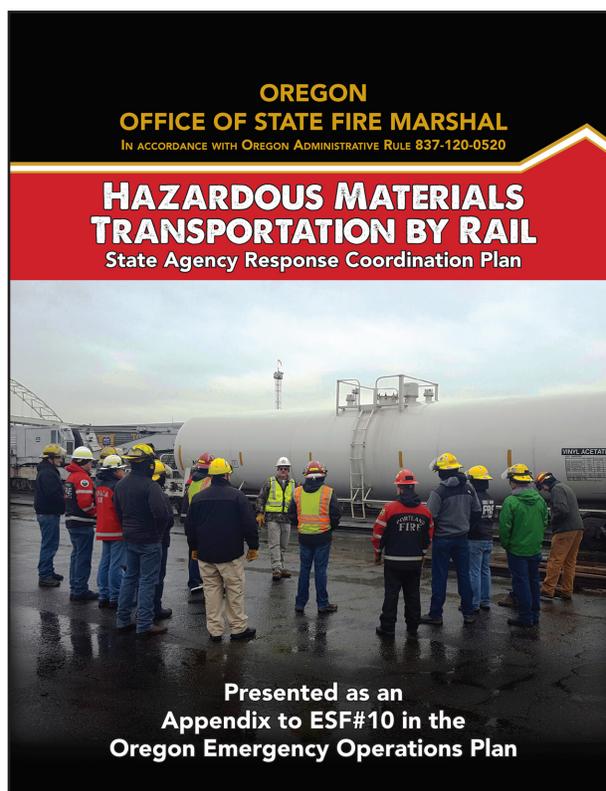
### State Hazmat by Rail Emergency Plan

In 2018, OSFM finalized a Hazardous Material Transportation by Rail State Agency Response Coordination Plan. This plan is an Appendix within Emergency Support Function (ESF) 10, in the Oregon Emergency Operations Plan (EOP). This plan applies whenever an incident exceeds or is anticipated to exceed local or tribal resources commanded by the agency having jurisdiction (AHJ). The level of State response to a specific incident is based on a number of factors including, the ability of local and mutual aid resources to respond, the quantity and hazard of materials released, whether there is a risk of the train or hazardous materials catching fire, and the extent to which the public, property, and the environment is threatened or exposed.

As guided by HB 3225, the OSFM coordinated the development of this plan along with its ESF 10 (Oil and Hazardous Materials) lead partner – the Oregon Department of Environmental Quality – and additional supporting agencies, including the Department of Human Services, Department of State Lands, Oregon Department of Forestry, Oregon Department of Transportation, Oregon Fish and Wildlife, Oregon Health Authority, Office of Emergency Management, and Oregon State Police.

This appendix provides information specific to emergencies involving the transportation of hazardous materials by rail and is intended to supplement and correspond local, state, and federal plans, including ESFs 4 and 10, Geographic Response Plans (GRP), as well as the EPA Region 10 Northwest Area Contingency Plan. Key elements of the plan include:

- Guides the coordinated state agency response to railroad emergencies involving oil or hazardous materials;
- Defines the roles and responsibilities of State agencies in responding to the unique characteristics of different hazardous materials emergencies;
- Discusses the specific authorities, capabilities, and assets that state government has for responding to Hazmat by rail incidents;
- Discusses the integration of the concept of operations with other elements of the Oregon EOP, including the unique organization, notification, and activation



processes and specialized incident-related reactions; and

- Defines guidelines for notification, coordination, and public information dissemination by state agencies during emergency response and subsequent recovery operations.

The plan is available for viewing online at:  
[https://www.oregon.gov/osp/Docs/ESF10\\_appendix.pdf](https://www.oregon.gov/osp/Docs/ESF10_appendix.pdf)

### Local Hazmat by Rail Emergency Plans

In 2018, the OSFM Hazmat Rail Program funded the development of eight Hazmat by Rail Emergency Response Plans for Local Emergency Planning Committees (LEPCs) and local emergency planning districts across the state. These plans focus on the most common hazardous commodities transported by rail through their respective areas and planned for a potential incident involving those identified commodities. These plans contain many elements including, but not limited to: plume modeling of potential toxic gas releases, risk analysis data on worst case scenario planning, shelter-in-place strategies and evacuation routes, initial first responder checklists, equipment cache locations, and much more. These plans were developed with input from local, state, federal, tribal, and railroad industry stakeholder agencies and are intended to integrate with existing plans to provide for a more fluid and coordinated response.

County	Rail line(s) Traversing Region	Plan Completion Date
Clackamas	UPRR*, BNSF, P&W*	Completed October 2018
Klamath	UPRR, BNSF	Completed August 2018
Linn-Benton	UPRR, P&W, Albany Eastern	Completed July 2018
Marion	UPRR, P&W	Completed August 2018
Morrow	UPRR	Completed June 2018
Multnomah	UPRR, BNSF, P&W	Completed December 2018
Polk	P&W	Completed June 2018
Umatilla	UPRR	Completed June 2018

\* UPRR - Union Pacific Rail Road / P&W - Portland & Western

# OSFM 2018 Annual Report on HB 3225



**HAZMAT Rail Incident Response Plan**  
**Clackamas County Disaster Management**  
 September 10, 2018



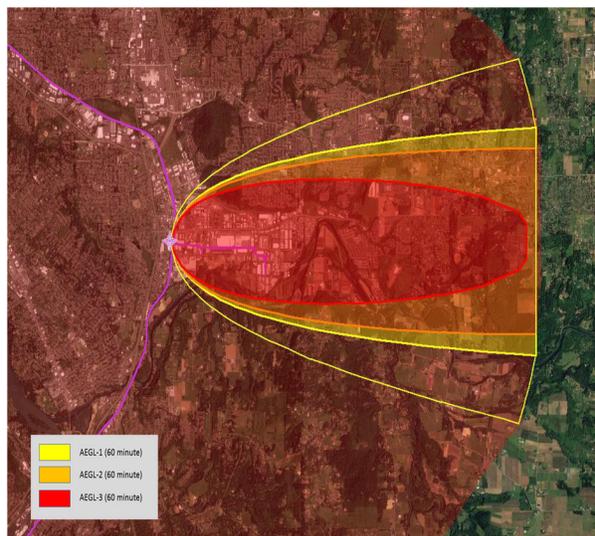
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 Under  
 Purchase Order: 18347

*Hazard Identification and Risk Assessment*  
**Clackamas County HAZMAT Rail Incident Response Plan**

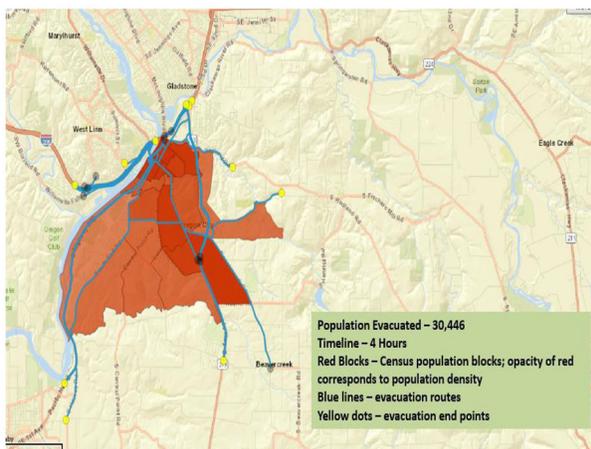
Nitric Acid	>6	0.68	0.3
Vinyl Acetate	5.1	2.1	0.77
Acetonitrile	1.9	0.82	0.4
Methylene Chloride	0.9	0.45	0.1
Toluene Diisocyanate	0.66	0.25	Not anticipated

Figure 5-5: Clackamas County – 22K Gallon Chlorine Railcar Release



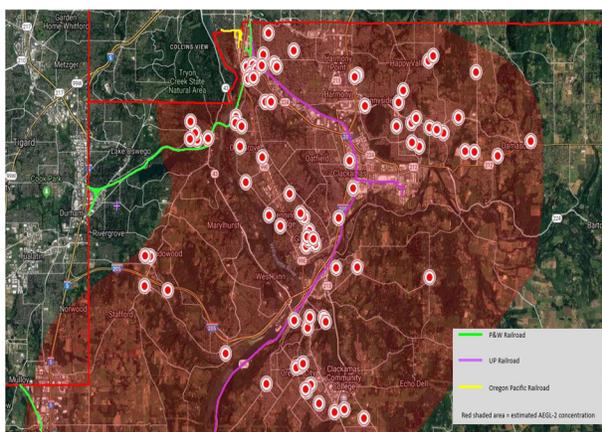
*Hazard Identification and Risk Assessment*  
**Clackamas County HAZMAT Rail Incident Response Plan**

Figure 5-22: Oregon City RtePM Evacuation Estimate



*Hazard Identification and Risk Assessment*  
**Clackamas County HAZMAT Rail Incident Response Plan**

Figure 5-7: Vulnerable Facilities within Chlorine and Hydrochloric Acid AEGL-2 Level – Northern Clackamas County



Clackamas County LEPC Hazmat by Rail Emergency Response Plan excerpt as it relates to a worse case scenario release and the affected population.

## **Railroad Reporting Mandates**

As mandated by the U.S. DOT Emergency Order Docket No. DOT-OST-2014-0067, rail carriers transporting in excess of 1,000,000 gallons of Bakken crude oil are required to provide the Oregon State Emergency Response Commission (SERC) – a role of the Oregon State Fire Marshal – a reasonable estimate of the number of trains transporting Bakken crude oil that are expected to travel through each county; identify and describe the petroleum crude oil expected to be transported, and provide all applicable emergency response information, as well as identify the routes over which the material will be transported. If no changes are expected from the previously submitted report, no new reports are required. The last updated report was provided by BNSF Railroad on June 1st, 2018, which added Multnomah County as an area where Crude Oil will now be transported through. The OSFM continues to make these notices available to the public and emergency responders on its website.

## **Access to Railcar Information During Emergency Response**

The OSFM continues to promote the use of the AskRail mobile application to Oregon's network of emergency officials, responders, and planners. This resource gives first responders immediate access to timely data regarding whether a rail car is loaded or empty, the type of hazardous materials a rail car contains, the appropriate reference page in the Emergency Response Guidebook, and an ability to view the rest of the trains' contents.

## Training and Community Outreach

### 2018 Training Accomplishments

In 2018, OSFM's Hazmat Rail Program continued partnerships with the Oregon fire service training community, regional Hazmat emergency response teams, and Union Pacific and BNSF Railroads, coordinating the delivery of both Hazmat emergency response and Incident Command System (ICS) training courses. Identified in the improvement plan resulting from the 2016 Mosier Crude Oil Train Derailment After Action Report, these courses have been offered free to local, state, federal, and tribal agency personnel and provide the basic framework for a safe, effective, and efficient response to a Hazmat by rail incident.



Hazmat Rail Emergency Response Operations training in Eugene.

In 2018, the OSFM facilitated the delivery of 2,000 personnel training hours to firefighters, Hazmat teams, emergency planners, elected officials, and other Hazmat rail responders. In response to best practices developed from after-action reviews of similar rail incidents, training programs have been identified that would further prepare emergency officials, responders, and planners for a future incident. Leveraging the specialized knowledge and training of OSFM staff, Regional Hazardous Materials Emergency Response Teams, incident management teams, and other qualified personnel, the OSFM was able to coordinate and host several courses. These courses adapt core response and incident command principles to the transportation by rail environment for first responders. In addition, our partner agencies the opportunity to train their staff in core ICS principles, preparing them to integrate their agency's mission and objectives into an active Hazmat transportation by rail incident.



Hazmat Incident Command course in Portland.

## OSFM Facilitated Training Courses 2018

### **Hazmat Rail Emergency Response Awareness (3 hrs.)**

This 3-hour course is designed to provide emergency responders the basic knowledge and awareness level training in response to a Hazmat by rail incident.

### **Hazmat Rail Emergency Response Operations (8 hrs.)**

This 8-hour course is designed to provide emergency responders the basic knowledge and operations level training in response to a Hazmat by rail incident utilizing a "hands-on" approach with actual railcars, locomotives, and a visit to a local rail facility.

### **Hazmat Incident Commander (16 hrs.)**

This 16-hour course meets OSHA and NFPA standards to qualify incident commanders to manage hazardous materials incidents. The intent of these standards is to provide an incident command system that is led by a single person who does not necessarily have extensive knowledge about the classification and verification of hazardous materials, but rather, who is able to manage emergencies of differing severity, as well as oversee the rest of the Hazmat team.

## Retired Railcars Installed for Training

Donated by BNSF railroad, the OSFM took delivery of and funded the installation of 1 retired railroad tank car as a training prop in 2018. With assistance from Union Pacific (UP), the tank car was transported from Portland to Hermiston. The tank car was placed with Umatilla County Fire District #1 at their training which is also the home to the Regional Hazardous Materials Emergency Response Team #10 center.

This invaluable prop offers both the Regional Hazmat team and local fire departments a hands-on tool to practice firefighting, leak mitigation, and spill release techniques to better prepare them for a potential Hazmat by rail incident. **This is the third tank car prop donated by BNSF and UP railroads to OSFM over the past 2 years and locations now include Salem, Eugene, and Hermiston.**

With training props like this and continued partnerships with fire departments across Oregon, OSFM is able to provide first responders with training and tools to effect safe, efficient, and effective emergency responses to Hazmat by rail incidents. The OSFM is eager to receive additional retired tank cars from our railroad partners in 2019 and beyond as requests for these props continue.



Site preparation and installation of the tank car training prop at Umatilla Fire District #1.

## Tabletops and Community Forums

OSFM staff participated in and facilitated tabletop exercises (TTX) and community forums to discuss planning and response strategies throughout 2018. These exercises and discussions revolved around Hazmat by rail incidents, often in a “round table” format with representatives from all forms of public and private agencies.

TTXs in particular, are designed to test emergency response plans, reveal operational gaps, identify training needs, and recommend updates to plans. Notable tabletop exercises or discussions in 2018 included:

<b>Activity</b>	<b>Community</b>	<b>Topic</b>	<b>Audience</b>
Oregon Water/Wastewater Agency Response Network (ORWARN) Conference 2018	Pacific Northwest	Mosier, Oregon Bakken Crude Oil Train Derailment Case Study	Civic leaders, private industry, emergency responders
Oregon Preparedness Conference 2018	Statewide	ESF 10 – Environmental Protection and Hazardous Materials	Emergency managers, private industry, emergency responders
Oregon Emergency Management Association Conference 2018	Statewide	Hazmat Rail Incident Response and Planning	Emergency managers, government executives and senior officials, non-governmental planning and response organizations
2018 Western Region State Emergency Response Commission (SERC) Conference	Western United States	Mosier, Oregon Bakken Crude Oil Train Derailment Case Study	Emergency managers, emergency responders, private industry, state and federal government executives and senior officials, non-governmental planning and response organizations
Continuing Challenge, California Hazmat Conference 2018	National Audience	Transportation Rail Incident Preparedness and Response (TRIPR)	Emergency managers, emergency responders, private industry, state and federal government executives and senior officials, non-governmental planning and response organizations

## OSFM 2018 Annual Report on HB 3225

<b>Activity</b>	<b>Community</b>	<b>Topic</b>	<b>Audience</b>
Idaho Hazmat Conference 2018	Idaho	Hazmat Rail Tank Car Specialist Training	Idaho Emergency managers, emergency responders, private industry, state and federal government executives and senior officials, non-governmental planning and response organizations
Oregon Mayors Conference 2018	Statewide	Hazardous Material Shipments via Rail and Highway and Responding to HazMat Incidents and the role of Elected Officials	Oregon mayors, elected officials, community leaders, city administrators
Tabletop Exercise	Columbia County	Derailment scenario involving a hazardous material release in St. Helens	Emergency managers, public safety, community leaders, hospital administrators
Tabletop Exercise	State Agencies - ESF 10	Derailment scenario involving a hazardous material release in Salem	Emergency managers, public safety, community leaders, hospital administrators
Tabletop Exercise	Umatilla County	Derailment scenario involving a hazardous material release in Hermiston	Emergency managers, public safety, community leaders, hospital administrators
Tabletop Exercise	Marion County	Derailment scenario involving a hazardous material release in Woodburn. Coordinated through FEMA and developed into an Integrated Emergency Management Course.	Emergency managers, public safety, community leaders, hospital administrators
Tabletop Exercise	Pendleton	Derailment scenario involving a hazardous material release in Pendleton	Emergency managers, public safety, community leaders, hospital administrators
Tabletop Exercise	Klamath County	Derailment scenario involving a hazardous material release in Klamath Falls	Emergency managers, public safety, community leaders, hospital administrators

## Resource Coordination

### Oregon Firefighting Foam Trailers

The OSFM continues to maintain eight foam firefighting trailers, complete with a cache of foam, pumps, and spray nozzles supplied by BNSF and Union Pacific railroads. These trailers have been strategically deployed throughout Oregon along mainline track where crude oil by rail is predominately shipped. In addition, these trailers are available not only for a crude oil by rail incident, but for any type of fire requiring large quantities of foam application for suppression purposes. They are available to respond at a moment's notice and housed with the following fire agencies:

- **Eugene/Springfield Fire Department** (co-located with OSFM Hazmat Team 02)
- **Klamath County Fire District #1** (co-located with OSFM Hazmat Team 04)
- **Ontario Fire Department** (co-located with OSFM Hazmat Team 14)
- **Portland Fire and Rescue Bureau** (co-located with OSFM Hazmat Team 07)
- **Salem Fire Department** (co-located with OSFM Hazmat Team 13)
- **Umatilla County Fire District #1** (co-located with Hazmat Team #10)
- **Mid-Columbia Fire and Rescue** (The Dalles)
- **Redmond Fire and Rescue**



Hazmat Tank Car Specialist training at Tualatin Valley Fire & Rescue.

Union Pacific foam trailer delivery to Mid-Columbia Fire & Rescue.

### Information Sharing

The OSFM continues to upload available Hazmat by rail response assets into the World-wide Regional Resource List (WRRL). Federal, state, local, and private oil spill response organizations in the Pacific Northwest all participate in this web-based database which allows oil spill preparedness planners and responders to catalog, order, and track oil spill response equipment, develop and review oil spill contingency plans, evaluate spill readiness drills and improve responses, describe a uniform method for ordering equipment from multiple sources during spills, keep accurate cost accounting information during responses, and plan effective equipment demobilization after spill incidents.

The OSFM continues to partner with the ODOT Rail and Public Transit Division to give first responders and emergency planners access to a secure web-based information sharing platform – known as GovSpace – that details types and quantities of hazardous materials transported by rail on a quarterly basis through specific geographic areas.

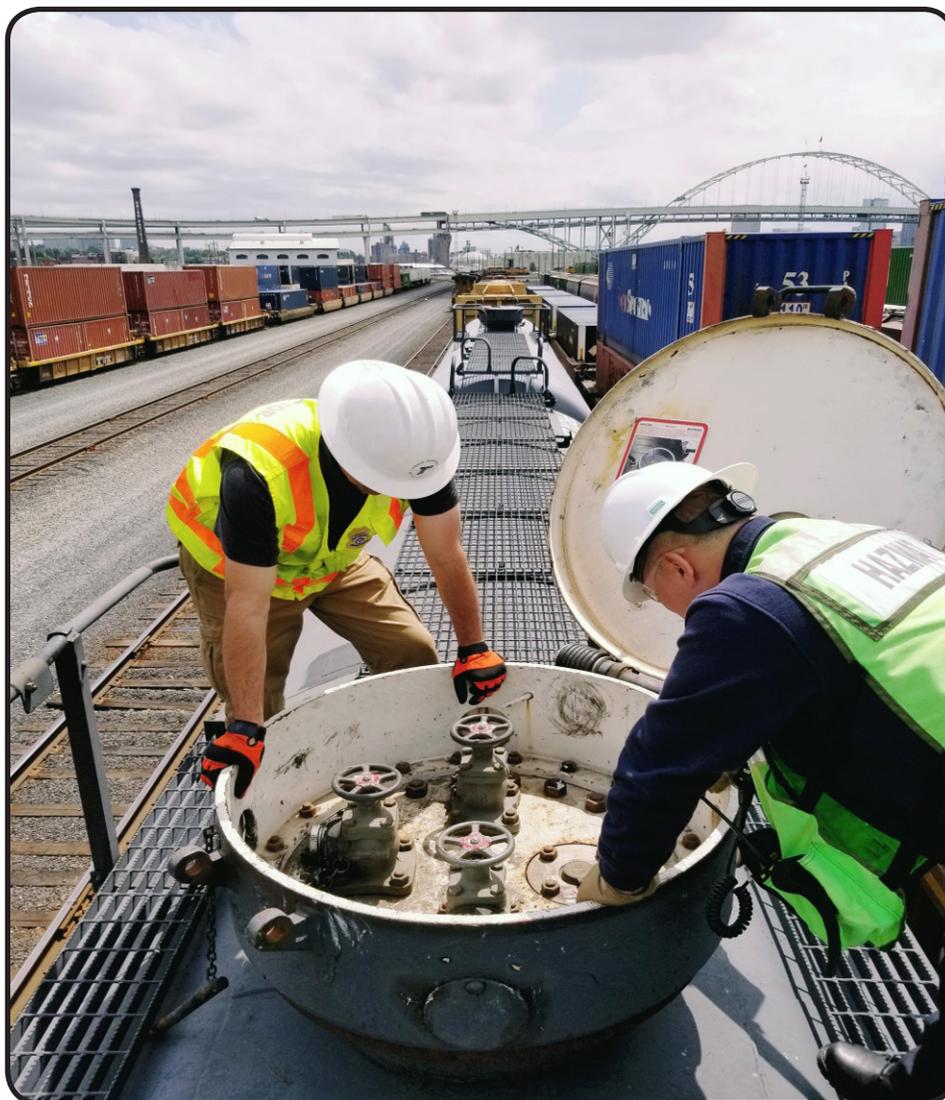
## OSFM 2018 Annual Report on HB 3225

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Emergency responders including fire chiefs, hazardous materials team leaders, and local emergency planners use this secured information sharing tool to drive decisions on planning, staffing, training, and equipment needs. Currently 54 individuals were registered in 2018 bringing the total to 139 registered individuals from 68 separate local, state and federal agencies or organizations. The OSFM continues to work closely with the Oregon fire service to promote this source of critical information.

### Inter-Agency Collaboration

In May of 2018, the OSFM participated in a collaborative Hazmat rail tank car inspection field trip that ODOT hosted for Portland Fire / Hazmat Team #7 and OSFM staff. They joined an ODOT hazmat inspector to see how they conduct Hazmat tank car inspections and to share information about tank car safety and compliance. Many of these safety and compliance principles can be utilized in pre-planning and training environments.



Collaborative Hazmat tank car inspection field trip with OSFM, ODOT, and Union Pacific.

## **Moving Forward**

### **Additional Tabletop Exercises**

In 2019, OSFM plans to facilitate several TTX's, each designed to test existing hazmat by rail emergency response plans funded by HB3225.

### **Full-Scale Exercise**

In 2018, the OSFM applied for grant funds to conduct a large, full-scale exercise in the spring of 2019 that was to involve and test local, state, federal, and tribal response capabilities using a simulated scenario of a train derailment that released hazardous materials. Unfortunately, grant funds were not awarded to fund the project. Conducting the proposed exercise is still strongly recommended.

Such an exercise is critical to test strategies for notifying and protecting the public, establishing incident command, implementing an incident management team, and controlling fires and chemical spills and releases. The overall goal will be to execute the successful coordinated multi-agency response to a large scale hazmat by rail incident with an effective transition from the emergency response phase to the consequence management phase.







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