

OREGON OFFICE OF STATE FIRE MARSHAL

2019 ANNUAL REPORT ON HAZMAT BY RAIL PROGRAM



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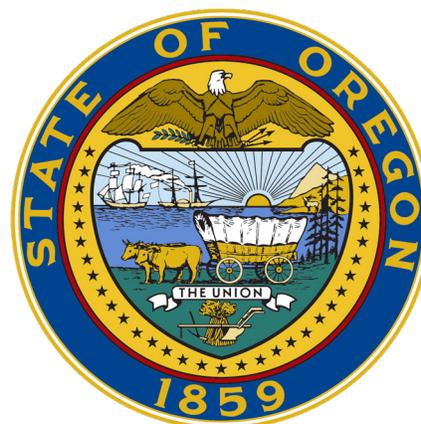
Table of Contents

Executive Summary and Legislative Overview	1
2019 Accomplishments	1
Emergency Planning	1
Training and Community Outreach	1
Resource Coordination and Information Sharing	2
Moving Forward	2
Emergency Planning	3
Railroad Reporting Mandates	3
Access to Railcar Information During Emergency Response	4
Training and Community Outreach	4
2019 Training Accomplishments	4
OSFM Facilitated Training Courses 2019	6
Investment at Fire Department Training Centers	6
Tabletops and Community Forums	6
Resource Coordination and Information Sharing	8
Oregon Firefighting Foam Trailers	8
Information Sharing	9
Moving Forward	9
Additional Tabletop Exercises	9
Additional County Rail Plans	9
2020 HazMat Rail Response Readiness Survey	9
HazMat Mitigation Equipment Purchases	10
Portland Fire & Rescue Department Training Railcar	10
House Bill 2209	10

Executive Summary

Legislative Overview

Governor Kate Brown signed legislation in 2015 relating to the safe transport of hazardous materials by rail. The law made changes to Oregon Revised Statute 453.307 to 453.414 relating to the safe transport of hazardous materials by directing 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 administrative rule (837-120-0520), a plan for the coordinated response to oil or hazardous material spills or releases that occur during rail transport, identify response resources (existing and needed), and to coordinate training for emergency responders. A copy of the full report is available on the OSFM website.

2019 Accomplishments

Emergency Planning

- Effective April 1, 2019, the Pipeline Hazardous Materials Safety Administration – or PHMSA – implemented a final rule to improve oil spill response readiness and to mitigate effects of rail accidents and incidents involving high-hazard flammable trains (HHFTs).
 - A HHFT is defined as a train comprised of 20 or more consecutive carloads of a Class 3 flammable liquid, or 35 carloads of a Class 3 flammable liquid throughout the entire train.
 - BNSF, Portland and Western, and Union Pacific railroads have all submitted required information to the Oregon State Emergency Response Commission (SERC).
 - In accordance with this new rule, the Oregon SERC has distributed the information to the appropriate local authorities.
 - This new rule supersedes the previous U.S. Department of Transportation Emergency Order Docket No. DOT-OST-2014-0067, a rule that was specific to crude oil only.
- 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 2019, the OSFM facilitated the delivery of several HazMat by rail emergency response training courses.
 - More than 1,500 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.
- o The training reinforced the importance of safety for all responders, built relations to promote interagency cohesion and efficiency, and ensured participants from multiple disciplines can effectively respond to HazMat by rail incidents as a unified front.
- Funding authorized by ORS 453.394 allowed OSFM to place retired rail cars at fire department training centers in Eugene, Hermiston, and Umatilla, improving multiple Oregon fire departments across the states. These investments continue to be impactful and improve readiness to respond to HazMat by Rail emergencies.
- Throughout 2019, OSFM staff participated in and facilitated a number of tabletop exercises and community forums. These activities engaged communities in preparedness planning, building local resiliency and raising awareness of local hazards. They also reinforced the importance of planning and response strategies, mitigating negative impacts from potential events requiring quick response and decision-making.

Resource Coordination and Information Sharing

- The OSFM continues to maintain eight foam firefighting trailers that have been strategically placed in the most vulnerable areas for quick response and mitigation, along mainline tracks throughout Oregon where crude oil or other high-hazard flammable trains (HHFT) travel.
- As ORS 453.392 seeks an inventory of all emergency response resources available, the OSFM continues to upload many of these assets into the Worldwide Response Resource List (WRRL).
- The OSFM continues to collaborate with the Oregon Department of Transportation (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.

Moving Forward

- The OSFM plans to facilitate additional tabletop exercises to test existing HazMat by rail emergency response plans.
- Using funding from ORS 453.392, the OSFM will purchase additional emergency response and training equipment specific to hazmat rail response.
- The OSFM has provided funding for HazMat by rail readiness goals such as equipment, training, and tabletop exercises based on preparedness gaps identified in 2016. This year, the OSFM will survey the Oregon fire service to assess the impact of this effort by identifying new response gaps in HazMat by rail incidents.

Emergency Planning

Railroad Reporting Mandates

Effective April 1, 2019, the Pipeline Hazardous Materials Safety Administration – or PHMSA – implemented a final rule to improve oil spill response readiness and to mitigate effects of rail accidents and incidents involving and high-hazard flammable trains (HHFTs). A HHFT is defined as a train comprised of 20 or more consecutive carloads of a Class 3 flammable liquid, or 35 carloads of a Class 3 flammable liquid throughout the entire train.

Docket No. PHMSA-2014-0105 (HM-251B) mandates that railroads must provide the following information to Oregon’s State Emergency Response Commission (SERC):

- A reasonable estimate of the number of HHFTs that the railroad expects to operate each week, through each county within the state or through each tribal jurisdiction;
- The routes over which the HHFTs will operate;
- A description of the hazardous materials being transported and all applicable emergency response information;
- An HHFT point of contact; and
- If a route identified is additionally subject to the comprehensive spill plan requirements, the information must include a description of the response zones (including counties and states) and the contact information for the qualified individual and alternate.

This federal rule further notes the HHFT notification must be maintained and transmitted in accordance with all of the following requirements:

- Railroads must update the notifications for changes in volume greater than 25 percent;
- Notifications and updates may be transmitted electronically or by hard copy;
- If the disclosure includes information that a railroad believes is security sensitive or proprietary and exempt from public disclosure, the railroad should indicate that in the notification;
- Each point of contact must be clearly identified by name or title, and contact role (e.g., qualified individual, HHFT point of contact) in association with the telephone number. One point of contact may fulfill multiple roles; and
- Copies of the railroad’s notifications made under this section must be made available to the U.S. Department of Transportation (DOT) upon request.

This new rule decrees that Oregon SERC shall further distribute the information to the appropriate local authorities at their request. This new rule supersedes the previous U.S. DOT Emergency Order Docket No. DOT-OST-2014-0067, a rule that was specific to crude oil only.

In accordance with this new rule, BNSF, Portland and Western, and Union Pacific railroads have all submitted required information to the Oregon SERC.

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 HazMat a rail car contains, the appropriate reference page in the Emergency Response Guidebook, and an ability to view the rest of the train's contents. The tool increases safety for all responders and planners and provides timely intelligence to support effective decision-making.

Training and Community Outreach

2019 Training Accomplishments



Pictured here: Members of the Eugene-Springfield State Fire Marshal Regional HazMat Response Team 02 practice setting up a decontamination shower. These showers are used to remove some hazardous materials from first responders and other contaminated individuals.

In 2019, OSFM's HazMat Rail Program continued its partnerships with the Oregon fire service training community, regional HazMat emergency response teams, and Union Pacific and BNSF railroads, coordinating the delivery of HazMat emergency response 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.

OSFM 2019 Annual Report on HazMat by Rail



Pictured here: The Mid-Columbia Fire Department firefighters inspect the foam trailer during the hands-on portion of the HazMat Rail Emergency Response Awareness Training class. The OSFM offered this course over three days to ensure volunteers and career staff were trained on the foam trailer application and use.

The OSFM facilitated the delivery of more than 1,500 personnel training hours to firefighter 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. The training highlighted safety and mitigation issues and increased understanding of hazards and the potential impacts of them on the environment, waterways, wildlife, and vulnerable populations most at risk.

Leveraging the specialized knowledge and training of OSFM staff, regional HazMat 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 get 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.

2019 OSFM Facilitated Training Courses		Locations
HazMat Rail Emergency Response Awareness	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.	<ul style="list-style-type: none"> • Sutherlin Fire Department • Mid-Columbia Fire & Rescue • Columbia Rail Summit • Umatilla County Fire Dist. #1 • LEPC Conference
HazMat Rail Emergency Response Operations	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.	<ul style="list-style-type: none"> • Netarts Fire Department
HazMat Incident Commander	This 16-hour course meets Occupational Health and Safety (OSHA) and National Fire Protection Association (NFPA) standards to qualify incident commanders to manage hazardous materials incidents. The standards 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.	<ul style="list-style-type: none"> • Astoria Fire Department • Bend Fire Department • Jacksonville Fire Dept. • Portland Fire & Rescue

Investment at Fire Department Training Centers

Through funding authorized by ORS 453.394, OSFM has invested in placing retired rail cars at fire department training centers in Eugene, Hermiston, and Salem. The retired railcars provide practical and realistic training opportunities for first responders to implement mitigation and containment tactics. Additionally, placing these railcars in local communities allows neighboring and rural fire departments and public safety organizations to train without commuting to another section of the state. Local training is cost effective and increases first responder participation. For most fire departments, obtaining these railcars would be difficult to obtain due to budgetary constraints or logistical hurdles. These investments will continue to be impactful and improve readiness of local fire departments to respond to HazMat by rail emergencies by expanding these training opportunities. In the future, the OSFM plans to install additional railcars in Redmond and Portland.

OSFM 2019 Annual Report on HazMat by Rail

Tabletops and Community Forums

OSFM staff participated in and facilitated tabletop (TTX) exercises and community forums to discuss planning and response strategies throughout 2019. These exercises and discussions revolved around HazMat by rail incidents, often in a roundtable 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 2019 included:

Activity	Community	Topic	Audience
Tabletop Exercise	Morrow County LEPC	HazMat Rail Incident Response and Planning	Emergency managers, private industry, emergency responders, public health liaisons
Tabletop Exercise	Lane County LEPC	HazMat Rail Incident Response and Planning	Emergency managers, private industry, emergency responders, public health liaisons
Columbia River Gorge Rail Summit	Columbia River Gorge Public and Private Sector Leaders	Rail Safety, Tribal Access, Group Discussion	Emergency managers, private industry, tribal leadership, emergency responders, public health liaisons
Local Emergency Planning Committee Conference	Oregon's Local Government and HazMat Facilities	High Hazard Flammability Trains, All Hazard Incident Planning and Operations, HazMat Transportation by Rail	Emergency managers, emergency responders, private industry, public health liaisons



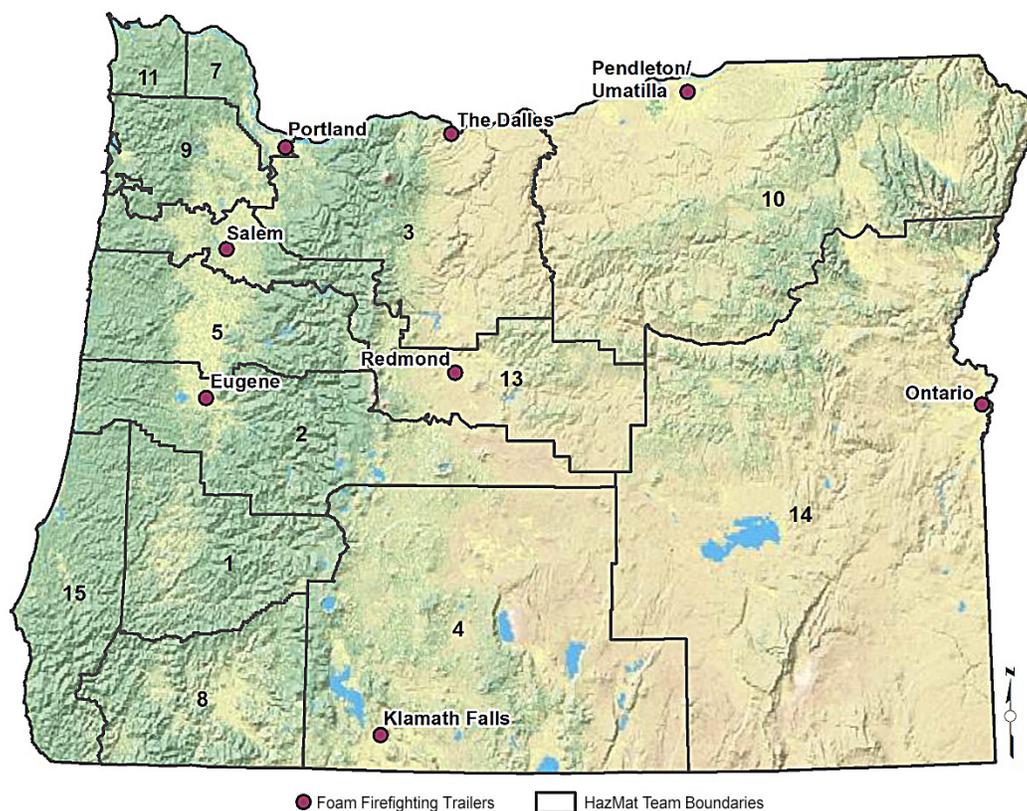
Pictured here: Members of the Morrow Co. Local Emergency Planning Committee (LEPC) participated in a Tabletop Exercise (TTX) involving a simulated release of anhydrous ammonia from a rail car at the Port of Morrow. Participants included the Boardman Rural Fire Protection District, Boardman EMS, the City Boardman Police Department, Morrow County Sheriff's Department, the local school district, and industry such as Lamb Weston. The training event built relations, validated emergency response plans, and tested capabilities.

Resource Coordination and Information Sharing

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 is predominately shipped. In addition, these trailers are available not only for a crude oil 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 #2)
- Klamath County Fire District #1 (co-located with OSFM HazMat Team #4)
- Ontario Fire Department (co-located with OSFM HazMat Team #14)
- Portland Fire & Rescue Bureau (co-located with OSFM HazMat Team #7)
- Salem Fire Department (co-located with OSFM HazMat Team #13)
- Mid-Columbia Fire & Rescue (located in OSFM HazMat Team #3 response area)
- Pendleton Fire Department and Ambulance Service (located in OSFM HazMat Team #10 response area)
- Redmond Fire & Rescue (located in OSFM HazMat Team #13 response area)



Information Sharing

The OSFM continues to upload available HazMat by rail response assets into the World-wide Response Resource List (WRRL). Federal, state, local, and private oil spill response organizations in the Pacific Northwest all participate in this web-based database. It 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 collaborate 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 a specific geographic areas. Emergency responders including fire chiefs, hazardous materials team leaders, and local emergency planners can use this secured information sharing tool to drive decisions on planning, staffing, training, and equipment needs. The OSFM continues to work closely with the Oregon fire service to promote this source of critical information.

Moving Forward

Additional Tabletop Exercises

In 2020, the Oregon Office of State Fire Marshal (OSFM) plans to facilitate several TTX's, each designed to test existing HazMat by rail emergency response plans funded by ORS 453.394.

Additional County Rail Plans

In 2020, the OSFM Hazmat Rail Program will continue to fund the development of Hazmat by rail emergency response plans for local emergency planning committees (LEPCs) and local emergency planning districts across the state. So far, only eight counties have taken advantage of this opportunity. These plans are intended to focus on the top, most common hazardous commodities transported by rail through their respective areas and proposed for a potential incident involving those identified commodities. Such plans typically contain elements including, 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.

2020 HazMat Rail Response Readiness Survey

When the HazMat by Rail program began, the OSFM surveyed the Oregon fire agencies about their level of preparedness and capability to respond to a rail incident. In response to the survey, the OSFM has provided localized trainings across the Oregon, as well as funding for first responders to attend courses offered at national training centers. In addition to these trainings, the OSFM purchased rail response equipment and funded commodity flow studies, HazMat rail response planning efforts, and tabletop exercises.

In 2020, the OSFM will deliver a new survey to Oregon fire agencies to reevaluate their level of preparedness and capability to respond to a rail incident. The results of this survey will help direct future projects and spending for derailment preparedness and response.

HazMat Mitigation Equipment Purchases

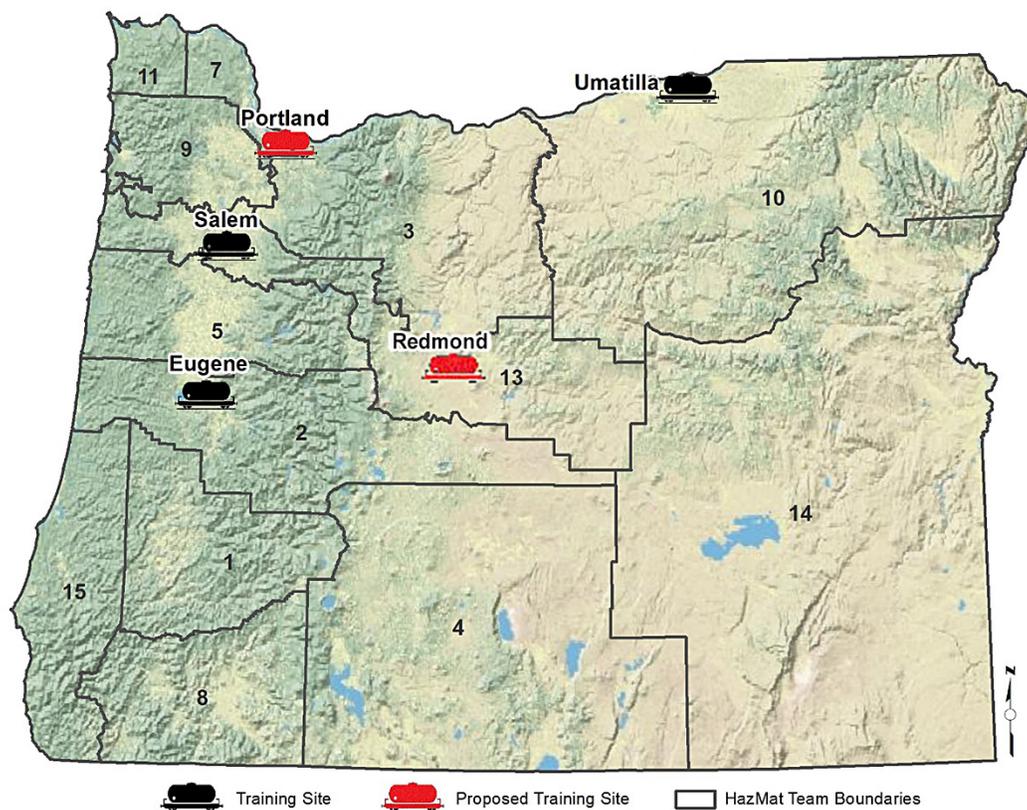
In 2014, the OSFM purchased a limited amount of Midland Response Kits for the Regional Hazardous Materials Emergency Response Teams. The kits allow for the quick and safe capping of leaking fittings and valves on the top of pressurized rail cars in the event of a chemical leak. At the time of purchase, the OSFM only purchased six kits to be shared among the 13 HazMat teams. In 2020, the OSFM intends to purchase seven additional kits. This procurement will allow each team to maintain and train on their own kit, which will expand their response capabilities and increase response readiness to derailments.

Additionally, the OSFM is exploring the purchase of powerful magnets which can attach themselves to non-pressurized railcars and are designed to withstand multiple chemical breakthroughs. When applied, the product provides quick and effective mitigation of a product released into the environment.

Portland Fire & Rescue Department Training Railcar

Working with the railroad industry partners, the OSFM has been successful in receiving donated railcars that have been placed at various training locations across Oregon. These training railcars serve as training props for firefighters to practice mitigation tactics in incidents involving the release of hazardous materials. Prior railcar donations in Oregon have been placed in Umatilla County Fire District #1 in Hermiston, Eugene-Springfield Fire Department in Eugene, and Department of Public Safety Standards and Training (DPSST) in Salem. The OSFM is requesting an additional railcar to be donated and placed with Portland Fire & Rescue at its training center.

HazMat by Rail Existing and Proposed Training Sites



House Bill 2209

House Bill 2209 was signed by the Governor in 2019 which sets forth additional requirements for the plan adopted by the Office of State Fire Marshal for a coordinated response to oil or hazardous material spills or releases that occur during rail transport.

Additional requirements include the provision of training, triennial tabletop exercises, triennial functional exercises, and triennial full-scale, multiagency, multijurisdictional, and multidisciplinary exercises that cover the entire sequence of events that take place during such emergencies.

In order to meet these additional requirements, the OSFM anticipates the need for one full-time training and exercise specialist who will plan, prepare, and offer training and exercises.

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