

Oregon Fuel Action Plan

Western States Petroleum
Shortage Response
Workshop

Deanna Henry
Emergency Preparedness
Manager

April 30, 2019



Emergency Powers: Fuel



State Declared Emergency – Management of Resources (ORS 401.188)

- ✓ Control, restrict, and regulate the use of food, feed, **fuel**, clothing, and other commodities, materials, goods, and services

Oregon Department of Energy (ODOE) Authority – (ORS 176.750-785)

- ✓ Develop and maintain a statewide contingency plan in response to petroleum shortages that impact Oregon
- ✓ Provide adequate fuel supplies to maintain emergency services, transportation, and the operation of the economy to ensure the health, safety, and welfare of the residents of the State of Oregon while an emergency exists

Fuel Executive Order

- ✓ Authorizes ODOE to implement the strategies in the Oregon Fuel Action Plan in response to a Cascadia Subduction Zone Earthquake and Tsunami

Energy Assurance & Resiliency History



Awards Grants to 50 States – Fall 2009

To enhance state government energy assurance and resiliency

Oregon Department of Energy (ODOE)

- Partnered with the Oregon Public Utility Commission (OPUC) and the Oregon Department of Geology and Mineral Industries (DOGAMI)
- Assessed seismic vulnerabilities and earthquake impacts on critical energy infrastructure from a 9.0 Cascadia Subduction Zone (CSZ) earthquake
- Findings went into the state's development of the Oregon Energy Assurance Plan (2012) and the Oregon Resilience Plan (2013)

USDOE Definition: Resilience

“The ability of the energy critical infrastructure to absorb, adapt to, and/or rapidly recover from a potentially severe and disruptive event”



Oregon Imports 100 Percent of the State's Refined Petroleum Products



- Washington refineries supply more than 90 percent
 - ✓ About 75 percent by Olympic Pipeline to Oregon
 - ✓ Remaining product by tanker ships to Oregon
 - ✓ Portland Fuel Hub – located on liquefiable soils
Anticipate significant fuel supply loss post Cascadia
- Utah refineries supply less than 5 percent to eastern Oregon communities
- California refineries supply less than 5 percent to southern Oregon communities

Oregon Fuel Supply & Distribution System



Petroleum
Distribution Terminals
Portland Fuel Hub



Pipeline to Eugene Terminal &
Portland International Airport



Barges on Columbia
to Eastern Oregon



Est. 1,500 Tanker Trucks
Throughout Oregon

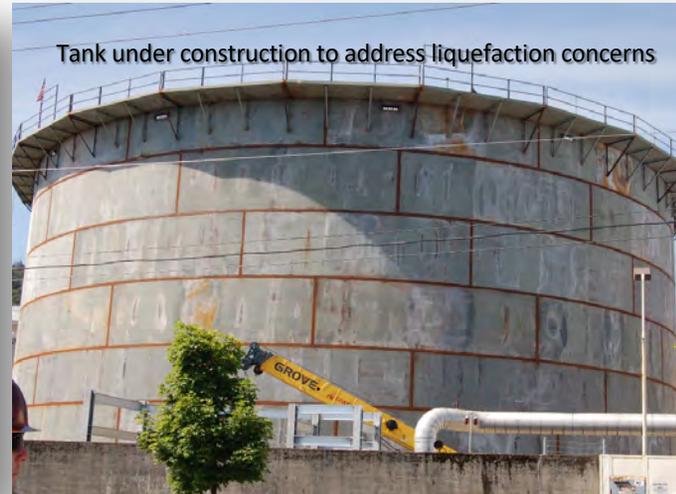


Est. 2,400
Fueling Locations

- Annual fuel imports estimated at three billion gallons
- Six day fuel delivery cycle
- Product delivered throughout Oregon by pipeline, barges, and tanker trucks
- Anticipate significant impacts to distribution system post Cascadia



DOGAMI Study Sites Aging Petroleum Infrastructure



Olympic Pipeline built in the 1960s without seismic design standards

Only 3 of the hundreds of fuel tanks at the Portland fuel hub likely to survive Cascadia

Marine docks receiving fuel will be damaged with moderate earthquake

Oregon Fuel Action Plan: Developed & Tested



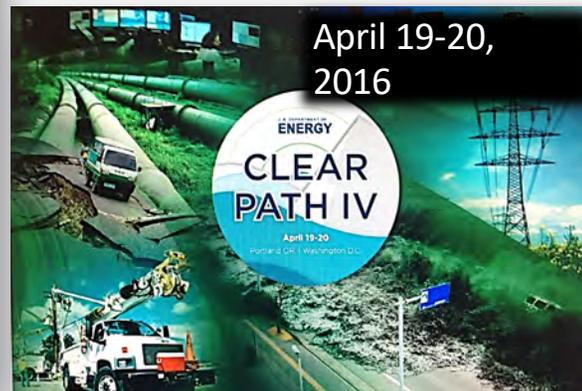
INITIAL DRAFT – 2016 OREGON FUEL ACTION PLAN



Plan, Prepare, Respond, & Recover
Severe Fuel Shortages

ODOE 2016 Exercise Goals

- Validate fuel management and distribution strategies with industry, federal, state, and local emergency response agencies
- Improve understanding of the federal response structure and how it integrates with the Oregon Fuel Action Plan and strategies
- Incorporate lessons learned from federal exercises and finalize the Oregon Fuel Action Plan for release and implementation



Oregon Fuel Action Plan Published: October 2017



OREGON FUEL ACTION PLAN



Plan, Prepare, Respond, & Recover
Severe Fuel Shortages

- Identifies ODOE authority and responsibilities to control and direct the state's overall response to petroleum emergencies
- Provides coordination structure for federal, state, county, tribal, and petroleum industry partners
- Provides structure for fuel allocation that identifies pre-approved priority users of fuel and user responsibilities
- Identifies state and county priority lifeline routes to support fuel deliveries
- Pre-designates Fuel Points of Distribution (FPOD) for receiving emergency fuel
- Plan on ODOE website - www./Oregon.gov/ENERGY

Oregon Fuel Action Plan: 9 Priority Actions



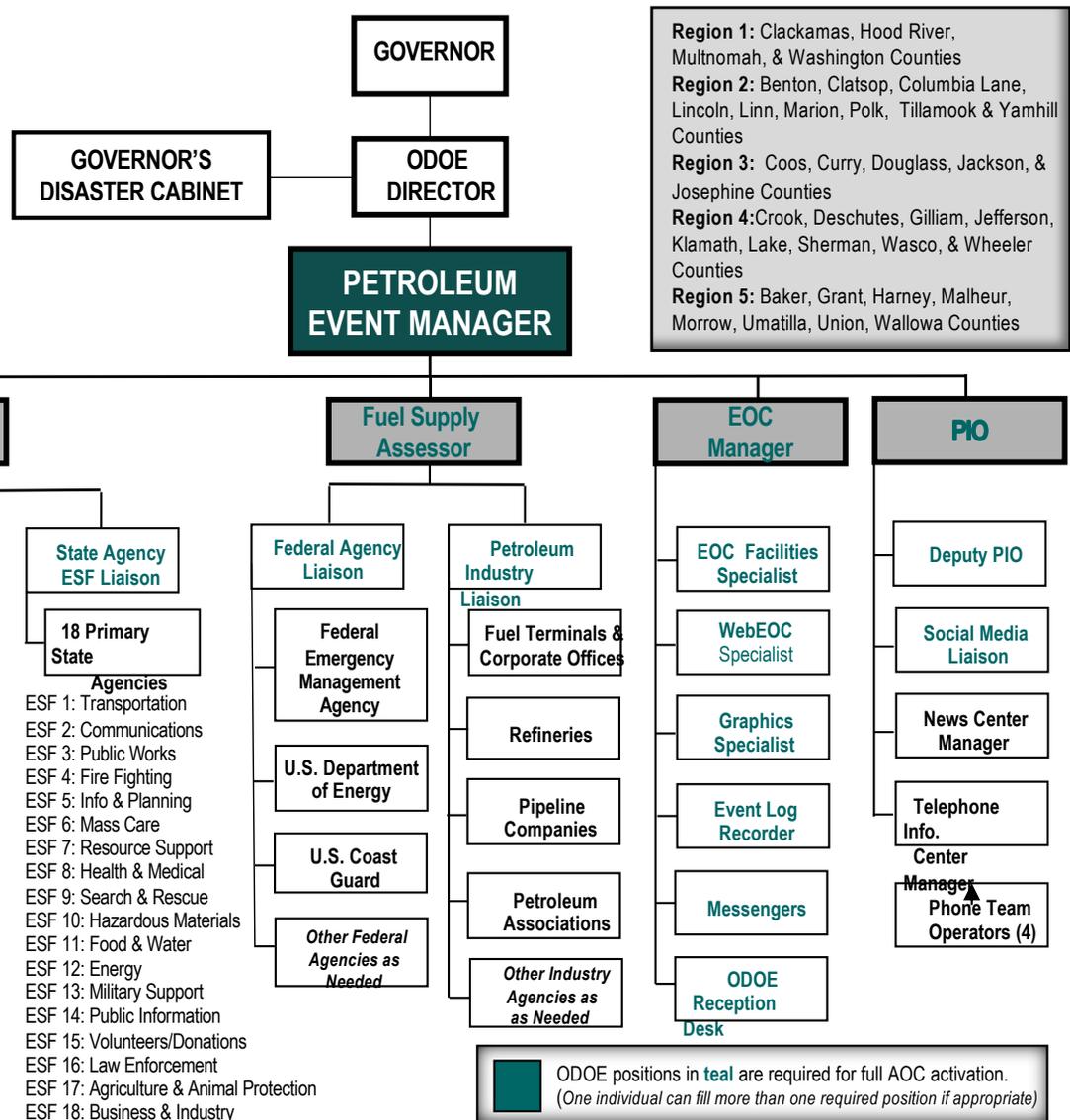
Action 1	Action 2	Action 3	Action 4	Action 5	Action 6	Action 7	Action 8	Actions 9
Notification Activation and Authorities	Public Information	Damage Assessment	Assess Fuel Needs & Determine Priorities	Outside Assistance: Fuel Supply	Fuel Conservation Measures	Temporary Waivers	Fuel Allocation	Recovery
<ul style="list-style-type: none"> - Initial Notifications - Activate ODOE AOC - Succession & Authorities 	<ul style="list-style-type: none"> - ODOE Fuel Emergency Outlook Web Page - Public Information Campaign – social media - News conferences - Telephone Information Center 	<ul style="list-style-type: none"> - Assess impacts to petroleum infrastructure - Estimate timeline for repairs - Provide fuel sector info & status updates 	<ul style="list-style-type: none"> - Assess fuel availability in Oregon - Assess 18 state ESFs, counties, and tribal fuel needs - Determine state & regional fuel priorities - Governor’s Disaster Cabinet 	<ul style="list-style-type: none"> - Identify & obtain fuel source - Identify viable fuel delivery options into Oregon - Identify viable options for dispensing fuel 	<ul style="list-style-type: none"> - Issue voluntary fuel conservation measures - Issue mandatory fuel conservation measures 	<ul style="list-style-type: none"> - Obtain temporary environmental operational, and safety waivers as needed to ensure the timely delivery of fuel 	<ul style="list-style-type: none"> - Review & approve/deny fuel requests (ESF Primary State Agencies, counties & tribes) - Allocate fuel to approved state agencies, counties & tribes - Odd/Even Fuel Allocation - Fuel Request Form Provided 	<ul style="list-style-type: none"> - Allocate fuel to support recovery activities - State Recovery Coordinating Team - SRF 6 - Governor’s Recovery Cabinet - Terminate fuel recovery activities as appropriate

ODOE Emergency Response Structure

- 24/7 Response Capabilities
- Response Position Procedures:
 - Key objectives
 - Task checklists
 - Guidance documents
 - Reference materials



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Fuel Allocation: Saving Lives, Restoring Critical Lifelines & Services



Challenge – Allocating fuel to emergency and essential service providers in the state involves 120 state agencies, 36 counties, 240 cities, and 9 federally-recognized tribes

Standardized Structure – Identifies three categories of priority fuel users:

- 18 ESF Primary State Agencies
- 36 Counties
- 9 Federally-Recognized Tribes



Priority Fuel Users: Responsibilities



County	City	Name	Address	State	Zip	Capacity (gallons)	Fuel Type	Above Below	Backup Power	Longitude	Latitude
Wheeler	Fossil	Faa	Kinzua Rd	OR	97830	1,000-4,999	Diesel	Above		0.0000000	0.0000000
Wheeler	Fossil	Fossil Fill-Up, Llc	609 W Main St	OR	97830	2000	Gasoline	Underground		-120.2138429	44.9991949
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Wheeler	Fossil	Fossil Fuel Inc	750 6Th St	OR	97830	10,000-49,999	Petroleum Distillates	Above		0.0000000	0.0000000
Wheeler	Fossil	Fossil Fuel Inc	750 6Th St	OR	97830	5,000-9,999	Petroleum Distillates	Above		0.0000000	0.0000000
Wheeler	Fossil	Fossil Fuel Inc	750 6Th St	OR	97830	10,000-49,999	Petroleum Distillates	Above		0.0000000	0.0000000
Wheeler	Fossil	Fossil Fuel Inc	750 6Th St	OR	97830	5,000-9,999	Diesel Fuel High Sulfur	Above		0.0000000	0.0000000
Wheeler	Fossil	Fossil Fuel Inc	750 6Th St	OR	97830	10,000-49,999	Diesel Fuel Low Sulfur	Above		0.0000000	0.0000000
Wheeler	Fossil	Fossil Fuel Inc	750 6Th St	OR	97830	10,000-49,999	Gasoline Unleaded	Above		0.0000000	0.0000000
Wheeler	Fossil	Wheeler County	115 1St St	OR	97830	500-999	Gasoline	Above		-120.2188156	44.9998682
Wheeler	Fossil	Wheeler County	115 1St St	OR	97830	500-999	Diesel Fuel	Above		-120.2188156	44.9998682
Wheeler	Kimberly	Faa	Se 1/4 Section 3	OR	97848	1,000-4,999	Diesel	Above		0.0000000	0.0000000
Wheeler	Mitchell	Fossil Fuel Inc	101 Main St	OR	97750	1,000-4,999	Petroleum Distillates	Above		-120.1543244	44.5667935
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Wheeler	Mitchell	Wheeler County	500 Hwy 26	OR	97750	500-999	Gasoline	Above		-120.1593730	44.5685329
Wheeler	Mitchell	Wheeler County	500 Hwy 26	OR	97750	500-999	Diesel Fuel	Above		-120.1593730	44.5685329
Wheeler	Spray	Lazy Wolf Resort Llc	607 Willow Hwy 19	OR	97874	10,000-49,999	Gasoline Unleaded	Above		-119.7936725	44.8331353
Wheeler	Spray	Lazy Wolf Resort Llc	607 Willow Hwy 19	OR	97874	1,000-4,999	Diesel Fuel Low Sulfur	Above		-119.7936725	44.8331353
Wheeler	Spray	Lone Elk Market Llc	800 Willow St	OR	97874	1000	Gasoline	Underground		-119.7941967	44.8349497
Wheeler	Spray	Lone Elk Market Llc	800 Willow St	OR	97874	1000	Diesel	Underground		-119.7941967	44.8349497
Wheeler	Spray	Spray School District 1	E Pine & Hwy 19	OR	97874	500-999	Diesel	Above		0.0000000	0.0000000
Wheeler	Spray	Wheeler County	917 Willow St	OR	97874	500-999	Gasoline	Above		-119.7950611	44.8368651
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ODOE Fuel Database

Prior to an Emergency

- Assess fuel needs for critical missions for sector or jurisdiction of responsibility
- Identify all fueling locations by county – Initial fuel source for life safety missions (*ODOE Fuel Database*)
- **Estimated 3 weeks** before bulk fuel supplies can be brought into some communities
- Counties to develop fuel management and distribution plans

Statewide Fuel Procurement Contract Renewal: Updated language



- Now References Oregon Revised Statutes 176.750-785
 - 176.750-785 - ODOE authority to implement the Oregon Fuel Action Plan to direct the allocation of all fuel stockpiles throughout the state
- Suppliers to provide prompt and immediate delivery of products and services governing states of emergencies and disasters to the State and participating agencies (includes 30 of 36 counties)
 - State/participating agencies reserve the right to obtain fuel from any source
 - Suppliers are not entitled to any claim or lost profits for fuel procured from other sources
- Suppliers to work with ODOE to develop statewide fuel distribution plan by county

Fuel Strategy: Air Response

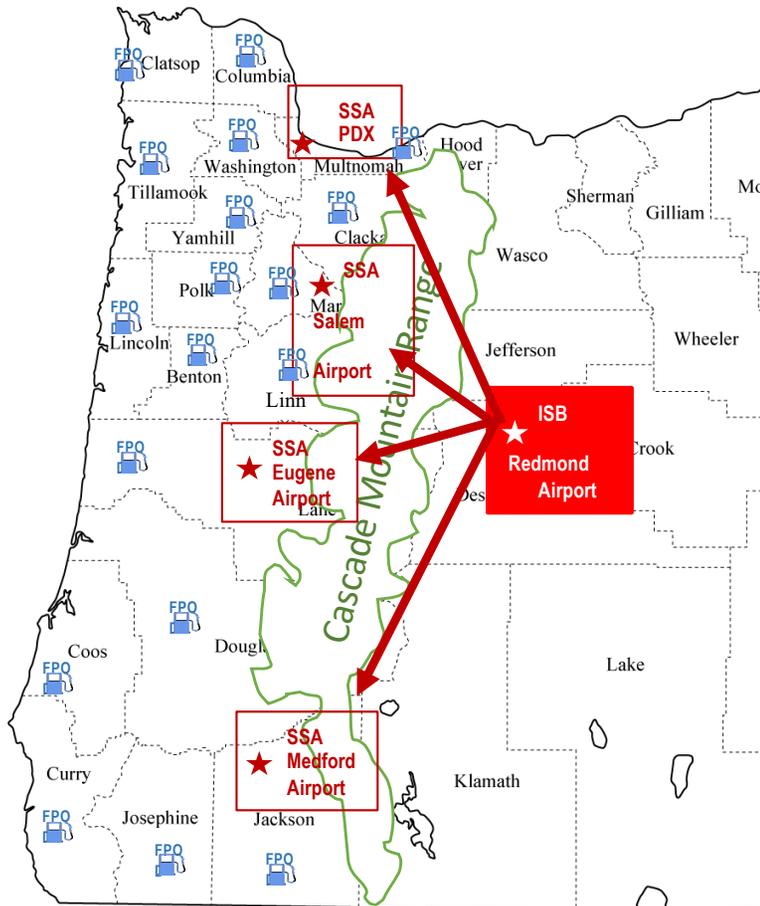


INITIAL AIR RESPONSE ACTIVITIES

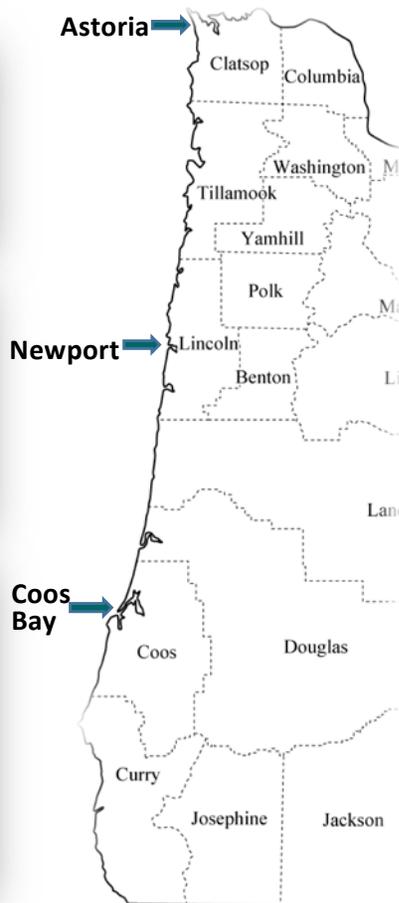
Required Support: Federal, Military, and Industry

Bulk Fuel Source – Outside Region

- Bulk fuel “pushed” into the federal Incident Support Base (ISB) - Redmond Municipal Airport
- Initial daily bulk fuel push into Oregon, Washington, and Idaho (*Defense Coordinating Element Region 10 projections*)
 - Unleaded gasoline – est. 75,000 gallons
 - Diesel – est. 400,000 gallons
- ODOE directs fuel movement from federal ISB to State Staging Areas and to the pre-designated Fuel Points of Distribution (FPOD) in the impacted counties



Fuel Strategy: Oregon Coast



U.S. MARITIME ADMINISTRATION & INDUSTRY ASSETS

Fuel Source: Outside Region

Maritime Assets – Deliver bulk fuel and operate portable fueling points along the Oregon Coast

- Ready Reserve Force ships out 7 – 10 days of notification
- Larger MARAD vessels ship out within 30 days of notification

Industry Assets – Supports Federal/Military Response

- Foster Fuels supports the Defense Logistics Agency for bulk fuel operation, distribution and storage under FEMA's Fuel Contract
- Crowley Maritime Corporation supports Navy on "over the shore" bulk fuel operation, distribution, and storage

Fuel Strategy: Central & Eastern Oregon



VIABLE CRITICAL INFRASTRUCTURE

Working Transportation, Power & Communications Systems

Fuel Source: Pasco Distribution Terminal-Petroleum Industry

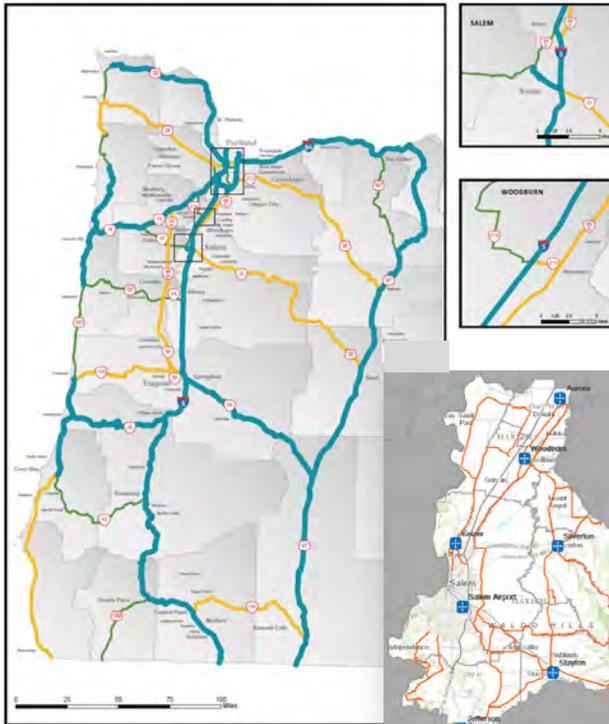
- Reliant on petroleum industry to meet fuel demands
- Implement voluntary & mandatory fuel conservation measures if needed
- Implement Odd/Even Fuel Allocation Program if needed
- Implement public information campaign to reduce fuel consumption



Fuel Strategy: State & Local Lifeline Routes



Oregon Department of Transportation (ODOT)



- **State Lifeline Routes** – Guide initial repairs on the transportation, power, and communication systems to support the delivery of fuel to the impacted communities
- **County Lifeline Routes** – Counties identify local priority routes that connect to state lifeline routes
- **Fuel Points of Distribution (FPOD)** – Counties pre-designate FPODs to receive emergency fuel supplies
- **Marion County Example:**
 - Identified Tier 1 priority routes connecting to state lifeline routes
 - Pre-designated 9 FPODs to receive emergency bulk fuel supplies

ODOE has data from 26 of 36 counties

Published Oregon Fuel Action Plan: Tested



January 25, 2018 Fueling Anxiety Tabletop: 100 Participants

- 4 **Federal** Agencies
- 16 **State** Departments
- 15 **County** Departments
- 17 **City** Departments and **Regional** Organizations
- 14 **Private Sector** Companies

Purpose, Scope, and Timeline (1 – 3 weeks post Cascadia)

- Discuss complexities involved in establishing and coordinating a fuel management system post Cascadia with key federal, state, local and private industry partners
- Validate existing federal, state, local, and private industry plans designed to support fuel management and distribution post CSZ
- Identify planning gaps and areas requiring improvement

Published Oregon Fuel Action Plan: Tested



State Fuel Planning Gaps and Lessons Learned - Highlights

- Need to Establish Fuel Allocation Priorities – **In Progress** ODOE drafts fuel allocation priorities in consultation with Primary ESF State Agencies overseeing critical lifelines and services
- Need to Develop Statewide Fuel Distribution Strategy to Priority End Users – **In Progress** ODOE works with the Oregon Fuels Association (OFA) to develop a statewide fuel distribution plan to assist counties
 - Pilot Project (2019-2020) – ODOE, OFA, fuel distributors, RDPO, Columbia, Clackamas, Multnomah, and Washington counties to develop a regional fuel distribution strategy
 - Clark County in Washington to participate in the Pilot Project – Clark County coordinates fuel planning with Oregon counties under the Urban Areas Security Initiative Program

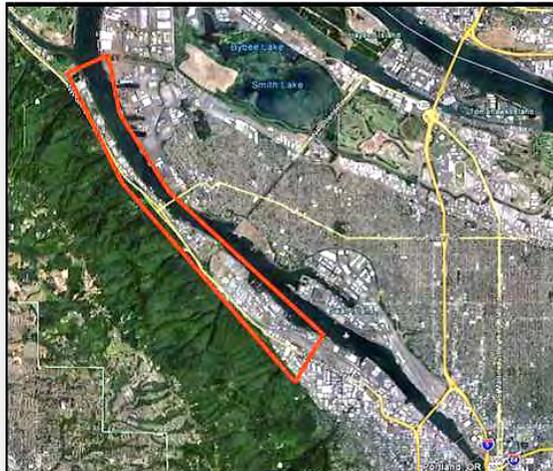
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State Fuel Planning Gaps and Lessons Learned - Highlights

- Need for Additional Fuel Sector Tabletops and Exercises with Federal, State, Local, and Industry Partners In Progress
 - 2019 Local Fuel Plan Tabletops – Sponsored by Marion, Polk, and Lincoln Counties
 - 2020 Regional Fuel Plan Tabletop – RDPO sponsored tabletop with partners from the 2018 Fueling Anxiety Exercise to evaluate progress
 - 2020 Industry Fuel Tabletop – Sponsored by Oregon Seismic Safety Policy Advisory Commission (OSSPAC)
 - 2022 Cascadia Rising 2 Exercise – FEMA Multi-State Full Scale Functional Cascadia Exercise to focus on critical infrastructure including the fuel sector

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State Fuel Planning Gaps and Lessons Learned - Highlights

- Need to identify an alternate location for a Fuel Hub if industry determines the existing location is unsalvageable post - Cascadia
- Industry Identified Requirements for Alternate Fuel Hub:
 - Upriver on stable soils within close proximity to current location
 - Access to waterway and rail systems
 - Government support
- **In Progress** OSSPAC Focuses on Fuel Sector
 - To Sponsor Collaborative Educational Workshop with Fuel Industry
 - ✓ Explain government's role in post-disaster fuel management
 - ✓ Identify incentives to allow industry to make seismic resiliency a priority
 - ✓ Consider alternate locations for a Fuel Hub with industry input
 - To Sponsor Cascadia Tabletop Exercise with Fuel Industry



Oregon Fuel Action Plan: In Progress



Published Oregon Fuel Action Plan Attracts Additional Private Industry Partnerships

- **Propane** – Oregon Propane Association engages ODOE to identify strategies for the propane sector to support statewide disaster response and recovery activities
- **Barge Service** – Port of Portland and barge companies engage ODOE to identify strategies for the use of barges to support statewide disaster response and recovery activities
- **Rail Systems** – Rail companies engage ODOE to identify strategies for using rail cars to store, deliver, and dispense diesel, ethanol, and propane to support statewide disaster response and recovery activities

New Private
Industry
Partnerships

Oregon Fuel Action Plan: Next Steps



Next Oregon Fuel Action Plan Update: Estimated 2020-2021 Timeframe

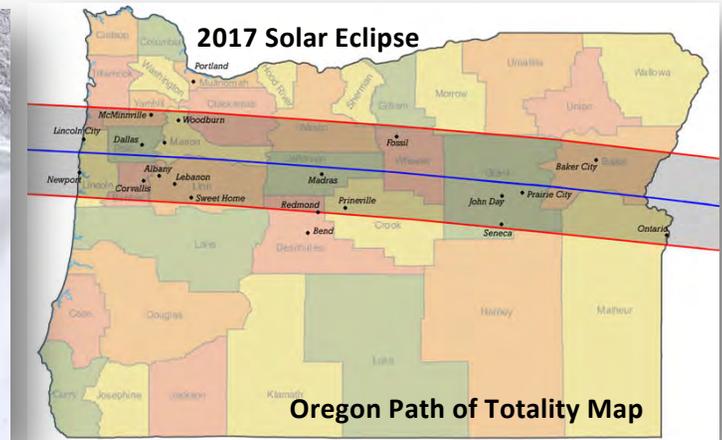
- Incorporate lessons learned from all exercises and viable new fuel strategies identified
- Complete ODOE AOC response position procedures and develop training series
- Test and validate revised Oregon Fuel Action Plan strategies and procedures in 2022 Cascadia Rising Exercise
- Incorporate lessons learned from Cascadia Rising 2022 and publish 2nd edition of the Oregon Fuel Action Plan by December 2022

Plan
Update &
Training

Oregon Fuel Action Plan: Scalable for All Hazards

Plan strategies designed for all levels of emergencies that result in fuel disruptions and shortages

- ODOE validated plan strategies and procedures in response to actual events
 - December 2016 Winter Storm
 - August 21, 2017 Solar Eclipse
 - Summer 2017 Statewide Fire Response
 - Spring 2019 Storm



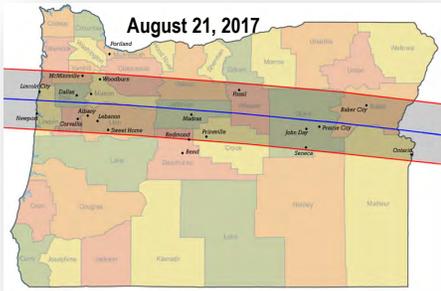
Oregon Fuel Action Plan Activated: 2016 Winter Storm

Snow storm caused wide-spread power outages shutting down Portland Fuel Hub - Kinder Morgan unable to pipe jet fuel to the Portland International Airport (PDX)

- ODOE worked with Portland General Electric (PGE) to ensure power restoration to the Fuel Hub was top priority
 - PGE provided status reports to ODOE and Kinder Morgan
 - PGE worked 24/7 to restore power
 - Kinder Morgan delivered jet fuel to PDX before the airport ran out



Oregon Fuel Action Plan Activated: 2017 Solar Eclipse



Influx of visitors to Oregon for the Solar Eclipsed on August 21, 2017 impacted 16 counties resulting in traffic congestion, strain on public safety services, and spot shortages in fuel

- ODOE worked with industry, state, and local partners before, during, and after the event:
 - Supply/Distribution – maximized supply volumes to meet anticipated demand, increased number of deliveries, and modified delivery schedules to avoid traffic congestion
 - Situational Awareness – monitored supply and distribution problems in 16 Oregon counties
 - Public Messaging – Developed messages for visitors/residents/public safety agencies on best practices to meet fuel needs; used social media to track and dispel rumors and issue accurate fuel information
 - Waiver – Secured 5-day Hours of Service Waiver from the Oregon Department of Transportation

Oregon Fuel Action Plan Activated: 2017 Fire Season

Eagle Creek Fire at Cascade Locks was started by a teenager igniting fireworks destroying approximately 50,000 acres shutting down the Columbia River and Interstate 84

- ODOE worked ODOT and fuel distributors to ensure alternate routes were available to complete deliveries
- ODOE worked with the Coast Guard to ensure 3 fuel barges were vetted and cleared for passage despite the Shutdown Order of the Columbia River
 - Barge transporting 420,000 gallons of ethanol
 - Barge transporting 900,000 gallons of Jet A
 - Barge transporting 1,596,000 gallons of diesel



Oregon Fuel Action Plan: 2019 Spring Storm

Record-setting snow in the south Willamette Valley caused wide-spread power outages making propane deliveries for backup generators at critical facilities and snowed-in communities difficult

- ODOE worked with ODOT, Oregon Emergency Management, Lane County Emergency Services, and Ferrellgas to deliver propane
- Poor road conditions prevented the use of bobtails (3,000 gallon capacity) to deliver propane to critical radio sites supporting the state's radio system, fire service, and other emergency providers responding to the storm
- Event highlighted extreme difficulty to deliver propane to critical facilities in a post-Cascadia environment



Oregon Fuel Action Plan

Deanna Henry

Emergency Preparedness
Manager

503-932-4428 Mobile

deanna.henry@oregon.gov



OREGON
DEPARTMENT OF
ENERGY