

State Resilience Officer Update

Oregon's Disaster Energy-Fuel Resilience/Planning Activities

Mike Harryman & Deanna Henry
May 13, 2021



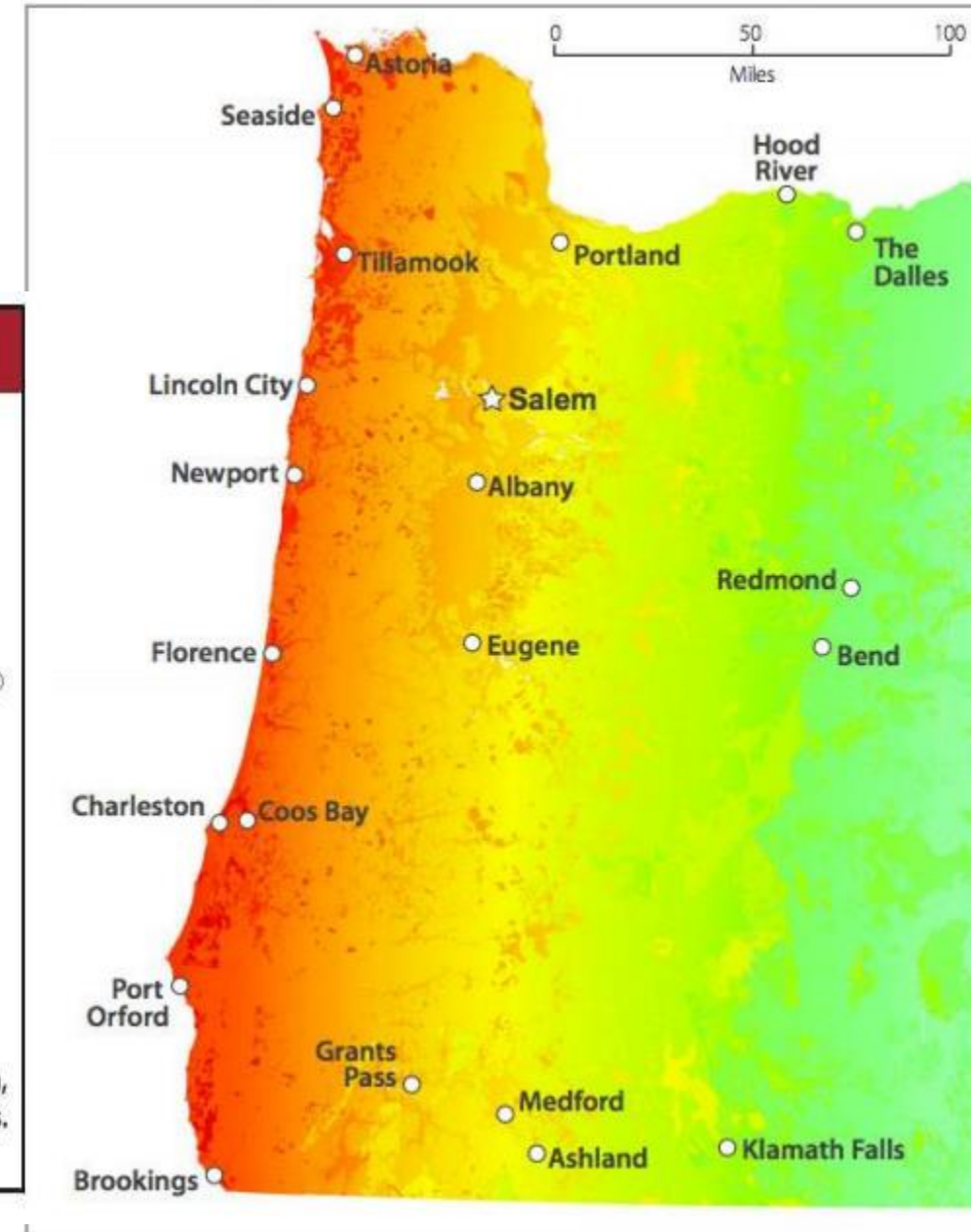
GOVERNOR KATE BROWN



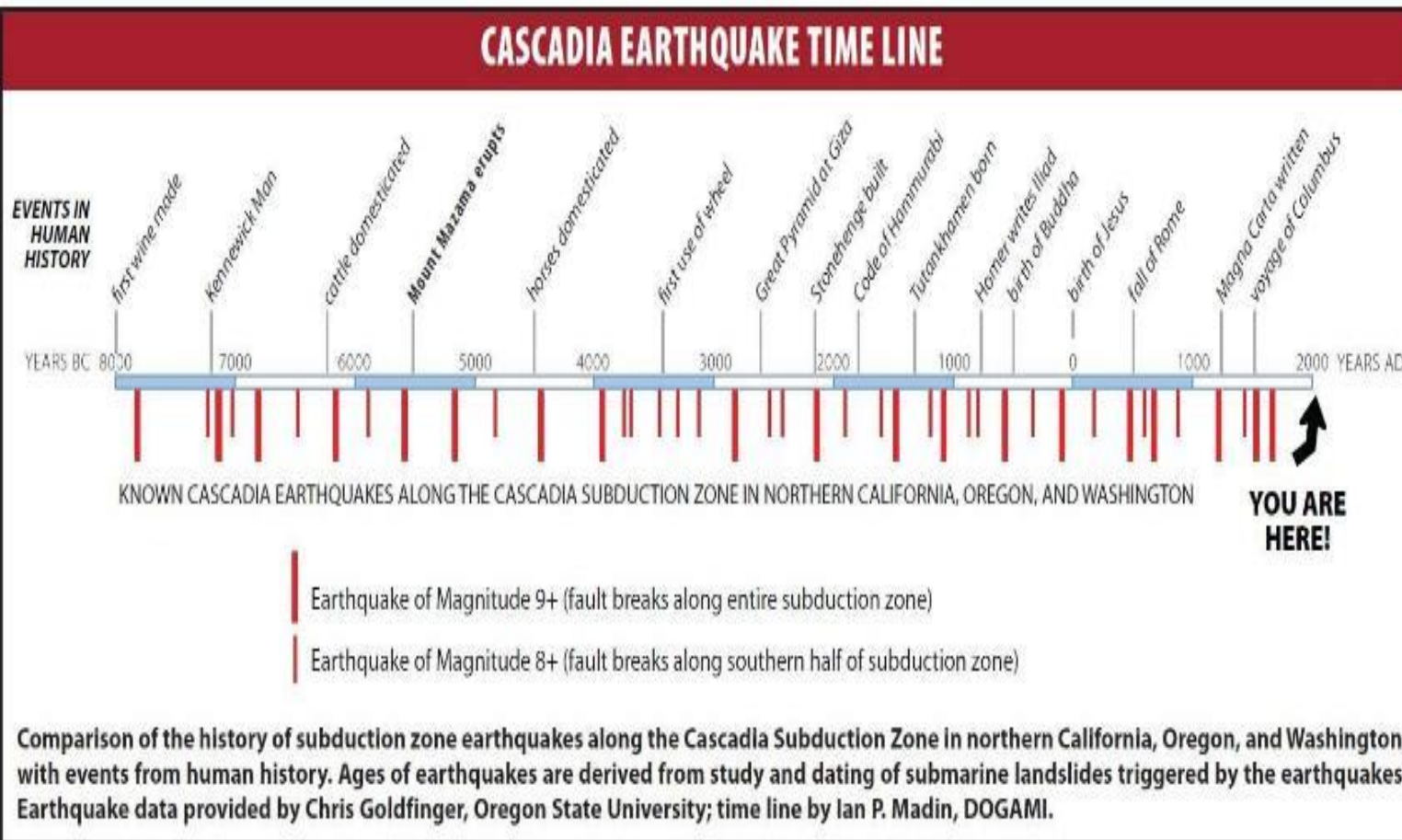
OREGON
DEPARTMENT OF
ENERGY

Why resilience?

ShakeMap for SIMULATED M9 Cascadia earthquake



CASCADIA EARTHQUAKE TIME LINE




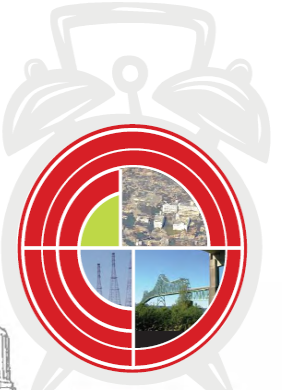
Building Resilience in Oregon

The Oregon Resilience Plan



Reducing Risk and Improving Recovery
for the Next Cascadia Earthquake and Tsunami

Report to the
77th Legislative Assembly

from
Oregon Seismic Safety Policy
Advisory Commission (OSSPAC)





Salem, Oregon
February 2013



CEI Hub Mitigation Strategies

Increasing Fuel Resilience to Survive Cascadia

OSSPAC Publication 18-01
December 11, 2018



Mass Care and Mass Displacement

after a Cascadia Subduction Zone Earthquake


OSSPAC Publication 18-02
September 24, 2018

2019 - 2021



TURNING POINT

An Agenda for Oregon's Future

GOVERNOR'S RECOMMENDED BUDGET
AND POLICY AGENDA



Governor Kate Brown
Kate Brown



Encouraging Homeowner Resilience

through Earthquake Insurance and Seismic Retrofit


OSSPAC Publication 18-01
September 25, 2018

Resiliency 2025:

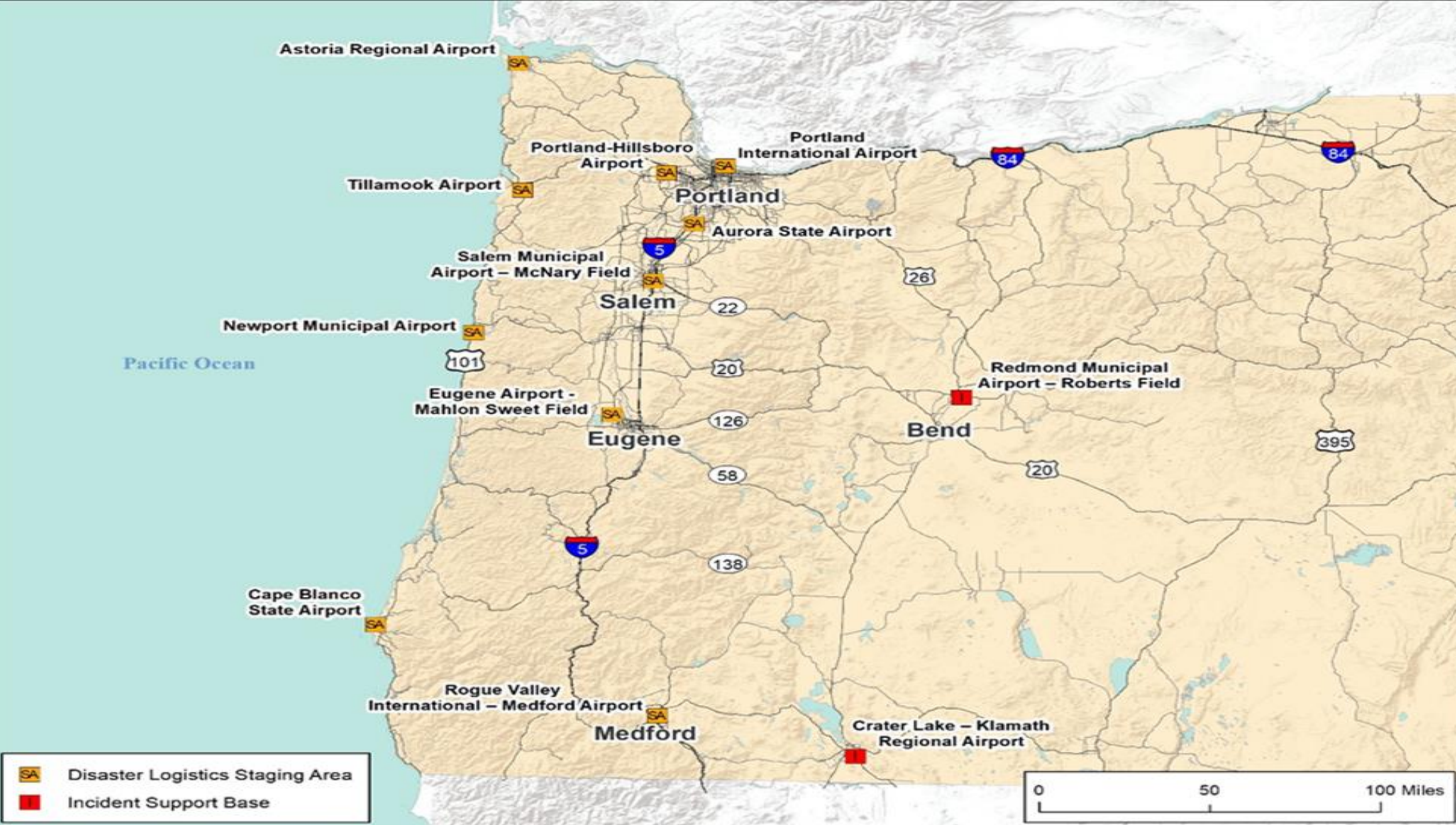
Improving Our Readiness for the
Cascadia Earthquake and Tsunami

Kate Brown, Governor
Mike Harryman, State Resilience Officer

October 16, 2018



STATE OF OREGON
OFFICE OF THE GOVERNOR
KATE BROWN



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

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

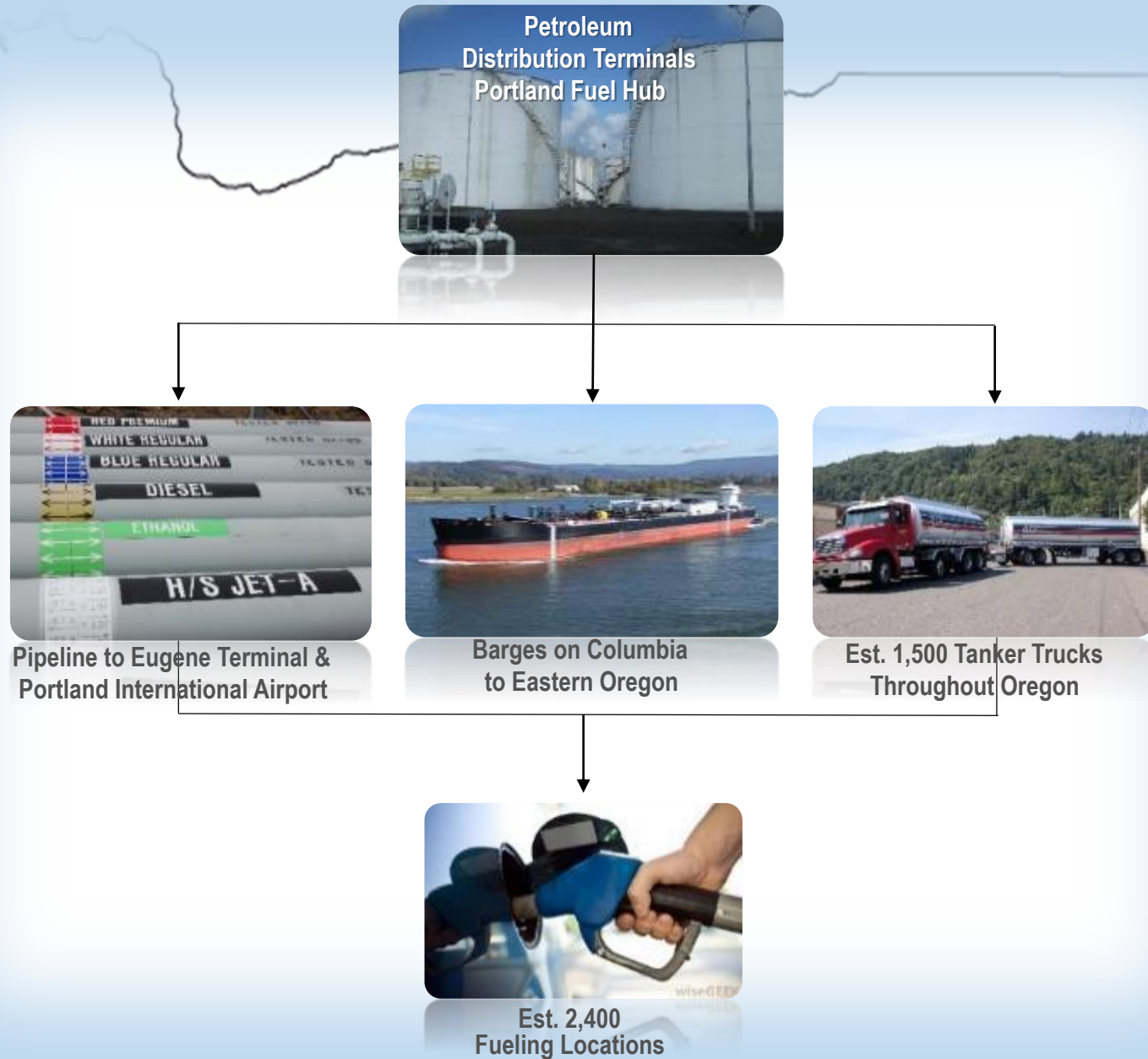
- Utah refineries supply less than 5 percent to eastern Oregon communities
- California refineries supply less than 5 percent to southern Oregon communities



Bay Area Refineries

Salt Lake City Refineries

Oregon Fuel Supply & Distribution System



- 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

Fuel Storage: Industry



Portland and Eugene Petroleum
Distribution Terminals:

- *Less than 1 week supply*



Estimated 280 Cardlocks:

- *4 – 6 day supply*



Estimated 1000 Retail Gas Stations:

- *2 – 3 day supply*

Oregon will likely be out of fuel in less than a week post Cascadia

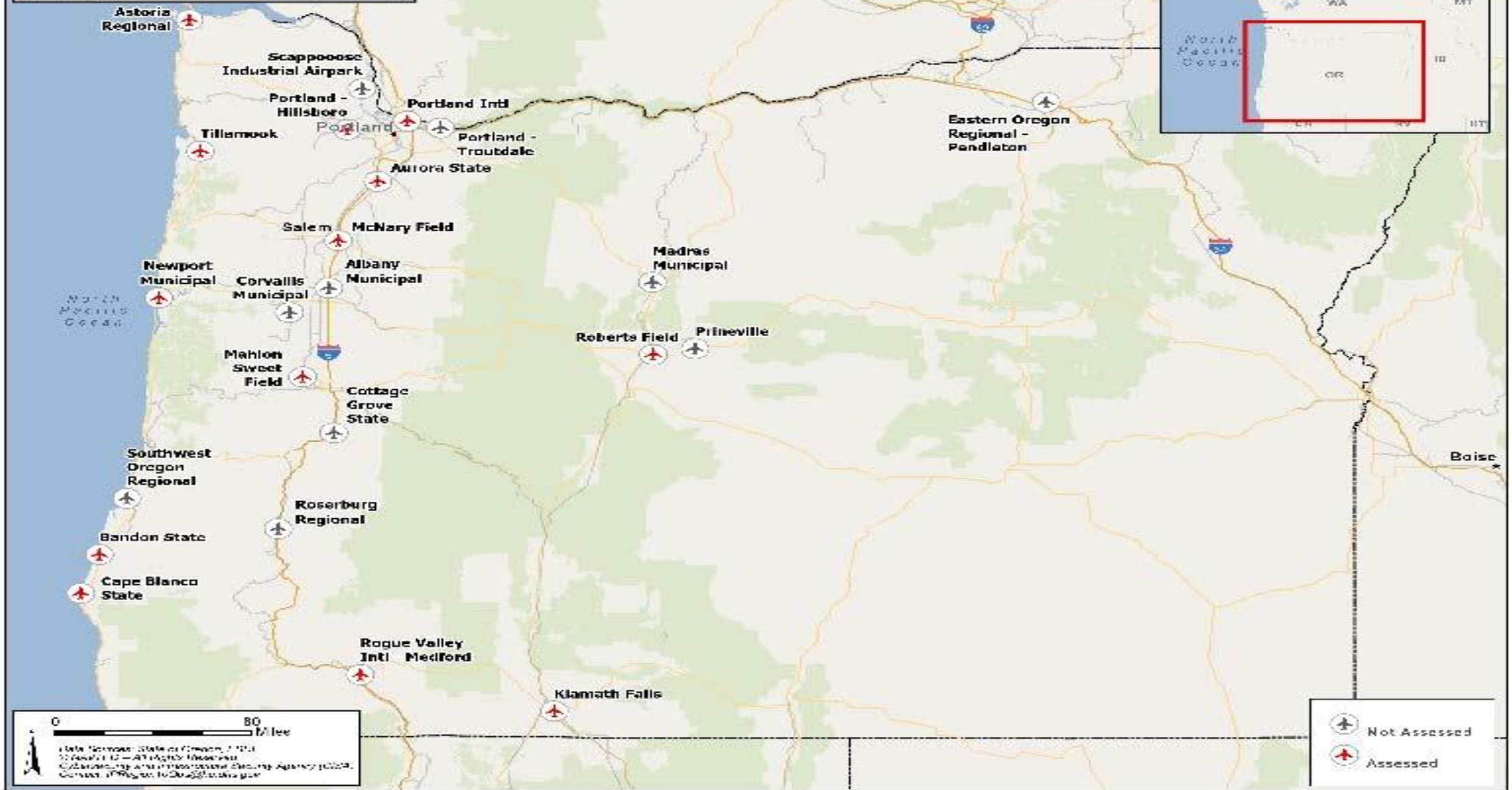
Fuel Storage: Airports



55 Airports in Oregon

- Onsite fuel storage varies significantly at airports
- Most airports have limited storage capacity for unleaded and diesel

Oregon RRAP Airports



0 80 Miles
Data Source: State of Oregon, 2014
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Contact: ORRAP@dot.oregon.gov

Not Assessed
 Assessed

OREGON FUEL ACTION PLAN

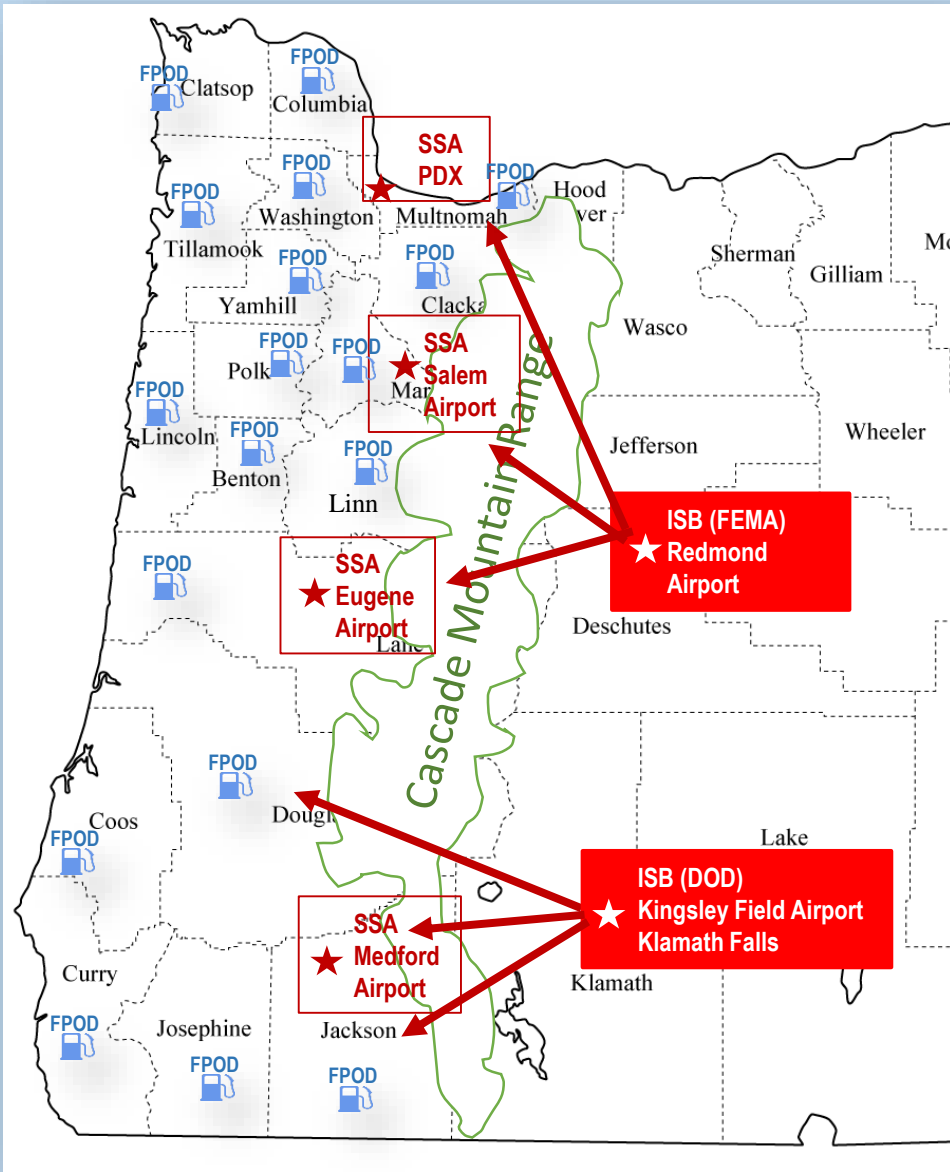


Plan, Prepare, Respond, & Recover
Severe Fuel Shortages

Create new temporary fuel supply chains into Oregon and establish new delivery systems into impacted areas

- Identifies 9 Actions ODOE will take to 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

CSZ Fuel Strategy: Ground Response



INITIAL RESPONSE ACTIVITIES

Required Support: Federal, Military, and Industry

Limitations: Requires viable roadway transportation system

1st New Temporary Fuel Supply Chain from the East

- 72 Hours - Bulk fuel “pushed” into the federal Incident Support Base (ISB)
- Initial daily bulk fuel push into Oregon, Washington, and Idaho (*Defense Coordinating Element Region 10 projections*)
 - Unleaded gasoline – est. 75,000 gallons (*about 8 trucks*)
 - Diesel – est. 400,000 gallons (*about 44 trucks*)
- 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



*Resources listed
would support
Region 10: Oregon,
Washington, and
Idaho*



FEMA EMERGENCY FUEL PURCHASING CONTRACT

Required Support: Interagency Agreement with the Defense Logistics Agency (DLA) to manage fuel deliveries in disasters

Limitations: Requires viable roadway transportation system

1st New Temporary Fuel Supply Chain from the East

- DLA contracted with Foster Fuels - Resources and Capabilities:
 - Establish 250 fuel sites within 300-mile radius of federal incident support base
 - By Day 10 - Provide estimated 2,650,000 gallons of unleaded, 2,650,000 gallons of diesel and estimated 1,000 trucks to support deliveries
 - In June 2019, DLA added Jet A and propane in the fuel contract
- Transporting fuel by air will be necessary initially, difficult to sustain; hazardous; restricted to small quantities - 3,000 gallon bladders

CSZ Fuel Strategy: Air Response

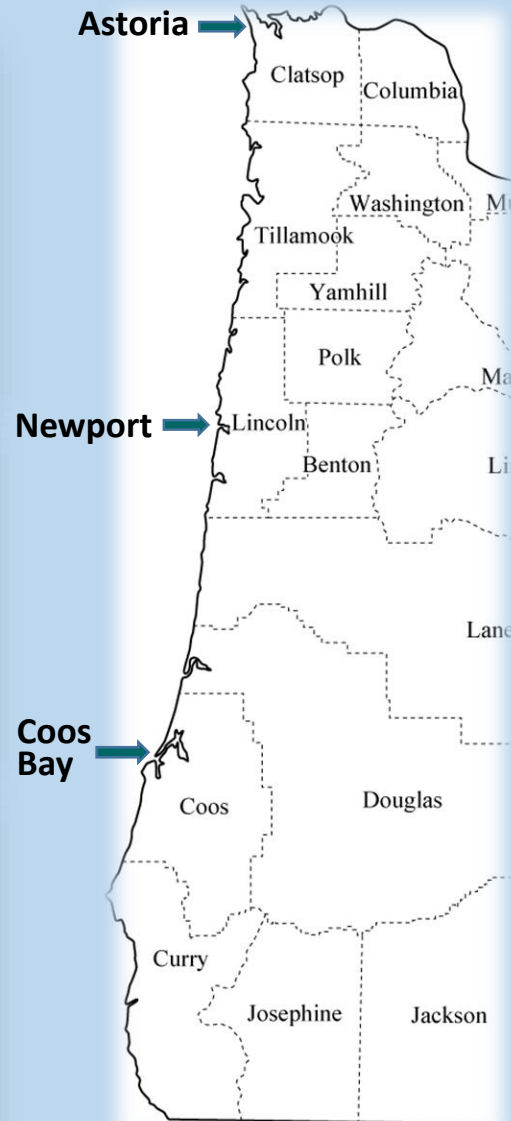
FUEL DELIVERIES TO SUPPORT ISOLATED COMMUNITIES

Required Support: Federal and Military

Limitations: Difficult to sustain, hazardous, and restricted to small quantities



CSZ Fuel Strategy: Over-The-Shore Response



OVER-THE-SHORE FUEL OPERATIONS

Potentially one of the more viable and sustainable fuel strategies

2nd Temporary Fuel Supply Chain from the Coast

RESOURCES AND CAPABILITIES

- Navy – Limited resources to support refueling efforts on the Oregon coast
 - Navy will bring only enough fuel to sustain its own operations
 - Only 2 vessels that can potentially support fuel mission
- USDOT’s Maritime Administration (MARAD) assets
 - Limited tankers (*gulf coast*) – requires 2 months to put into service
 - Complete Commercial Market Assessment for FEMA to identify private sector resources and capabilities to assist impacted states

Over-The-Shore Ops: Private Sector Capabilities



FACT FINDING TRIP – BARROW, ALASKA

August 19-21, 2019

Purpose – To Assess:

- Private industry resources and capabilities to strengthen Oregon's over-the-shore bulk fuel operations
- Response time and logistics coordination requirements
- Need for public/private partnership to ensure timely fuel deliveries along the Oregon coast working inland

State and Federal Participants

- Oregon Department of Energy
- Oregon National Guard
- Oregon Department of Administrative Services
- Federal Emergency Management Agency
- U.S. Army North, Defense Coordinating Element

BARROW OPERATIONS

Tanker vessel stationed 1-3 miles offshore to fuel barges



Barge leaving tanker for beach



Barge arrives on beach



PRIVATE INDUSTRY SHIP-TO-SHORE FUEL OPERATIONS

Crowley Maritime Corporation

Resources and Capabilities

- Delivers fuel to 300+ remote and austere locations in Alaska
- Responds to emergencies worldwide to support fuel operations
- Response time – Estimated 14 days upon notification
- Fuel assets and resources can be adjusted as mission requirements change
- Custom built vessels and equipment designed to support fuel deliveries to shoreside tank farms, temporary bladder farms, and directly into tanker trucks
 - Fuel Tankers: 3.5 – 14 million gallon capacity
 - Deep Draft Barges: 2 – 3.5 million gallon capacity
 - Shallow Drift Barges: 275 – 600 thousand gallon capacity



ASSESS NEED FOR PUBLIC-PRIVATE PARTNERSHIP

Considerations

- Cascadia event would overwhelm the military capabilities to support over-the-shore fuel operations for OR and WA
- FEMA-DLA acknowledges large gaps in the federal fuel contract for over-the-shore fuel operations
- ODOE has broad authority to develop contracts or mechanisms to bring fuel into the state

ODOE Next Steps

- Continue discussions with private industry to further identify need to match capabilities
- Work with ODOJ to determine whether a partnership with private industry is a viable option

Oregon Fuel Action Plan: Scalable for All-Hazards

ODOE activated fuel plan strategies in response to COVID 19, Wildfires, and Winter Storms

COVID 19: March 2019 – Present

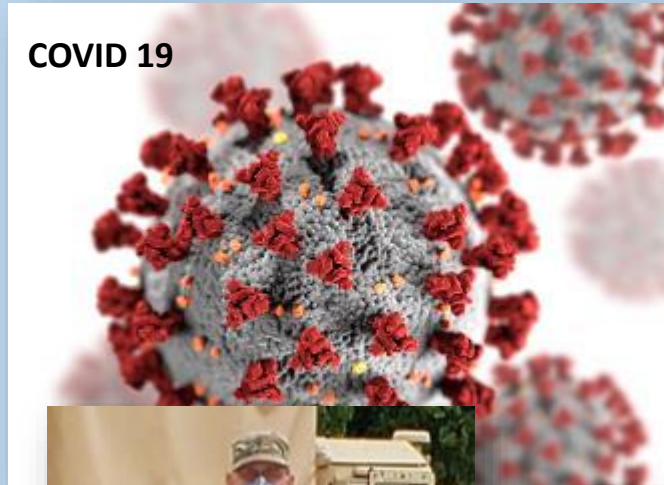
- Coordinated Hours of Service Waiver
- Coordinated Reed Vapor Recovery Waiver
- Obtained 14,000 cloth masks and 1,075 non-contact infrared thermometers for critical fuel workforce

Wildfires: September 2020 - February 2021

- Coordinated Hours of Service Waiver
- Ensured Ethanol deliveries by rail to Eugene
- Assisted cardlock facility to obtain Conditional Use License to sell unleaded fuel to residents

February 2021 Ice Storm

- Coordinated fuel deliveries to critical facilities
- Coordinated the increase of fueling limits for 1st responders at cardlock facilities





POTENTIAL TEMPORARY, LOCALIZED SPOT LIMITATIONS

- Increase in vacation travel
- **NOT** fuel supply issue, but a growing shortage of drivers in Oregon and nationwide
- ODOE working with Oregon Fuels Association, Oregon Trucking Association, and ESF 14: Cross Sector Business and Industry to address potential summer fuel concerns

Ramping Up for Cascadia Rising 2022



FEMA CASCADIA RISING 2022 EXERCISE (CR22) – June 13-17

- Government, tribes, military commands, and the private sector in OR, WA and ID coordinate simulated field response operations to test capabilities and readiness

USDOE CLEAR PATH IX EXERCISE – June - August 2021

- All levels of government and energy industry participate in a series of virtual energy sector tabletop exercises to test Oregon and Washington plans and strategies in response to a Cascadia event



ODOE EXERCISE PREPARATION

- Develop statewide fuel distribution plan with Oregon Fuels Association and key distributors for fuel delivery for last mile supply chain
- Develop guidance to prioritize fuel allocations to support mission critical functions
- Develop fuel contracts as appropriate
- Update Oregon Fuel Action Plan and validate new strategies in CR22

Thank you

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