



## Portland LEAP Scenario

### Details

- What:** A Cascadia Subduction Zone earthquake with an impact to Portland @ (M) 8.0.  
**Where:** The earthquake occurs directly west of Portland (90 miles away).  
**When:** At noon on Wednesday in November 2011.  
**Who:** Portland population and visitors impacted.  
**Timeline:** This is up to 72 hours after the earthquake. It is now Saturday.  
**Weather:** Cold and clear at this time.

### Coordination, Direction & Control

#### Government Agencies

- The City of Portland Emergency Operations Center (EOC) has been operating on 12 hour shifts for three days.
- The unified incident command personnel consist of: representatives from Portland Fire & Rescue, Portland Police, and Portland Bureau of Transportation. The State of Oregon ECC is operating. Representatives of the Oregon Public Utility Commission (PUC), Oregon Department of Energy (ODOE), and Oregon Emergency Management (OEM) are in contact. Fuel allocation and distribution is a primary topic. Portland and Multnomah County Emergency Management are collaborating. Oregon Department of Transportation is in contact.
- Overall objectives are life safety, protecting public and private property, environmental preservation and business continuity.
- The Disaster Policy Council (DPC) is led by the Mayor of Portland and advised by the Emergency Manager; they are making decisions about City resources. The Mayor of Portland has centralized control of City resources (City Code 15.08.020).
- The Governor of Oregon has declared a State of Emergency for Oregon.

#### Non-Government Organizations

- Liaison agencies have been identified that represent diverse populations, non-profit organizations, business, industry, environment and the energy providers.
- The American Red Cross is providing disaster services. They also have a connection to the City of Portland EOC through the liaison position.
- PGE, Pacific Power, NW Natural, Williams Northwest Pipeline, and Olympic Pipeline have set up their emergency operations offices. They also have a connection to the City of Portland EOC through the liaison position.

### Communications

- Most communication systems are operating at some level. The systems include: public switched telephone network (PSTN); cellular and mobile wireless network; satellite voice and data communication; public safety radios; amateur radio; paging; and internet. Amateur radios and satellite voice and data communication are operating at 100%; internet is intermittent.



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- Amateur radio operators are located at most fire stations (there are 30).
- Key buildings in downtown Portland are severely damaged; this has impaired communications service centers. One of the main hubs of communications links seventeen telecom internet providers; it is able to provide intermittent service.
- CenturyLink, Comcast and other communication networks will activate their emergency operations. Government liaisons will interface with local, county, state emergency staff. Workforce from outside of the area may be brought in.
- Text messaging is the most reliable form of non-emergency communication.
- Local news channels are using helicopters to view damage in the area.

### **Emergency Public Information**

- Many hospitals are damaged but all are open.
- The Burnside Bridge is open to emergency response vehicles only. Passenger boats are transporting people from Willamette Park to the Oaks Park ramp.
- Buses, MAX lines and streetcar systems are operable on a limited basis in some areas of the City. Tracks are damaged.
- Messages are provided to the public through available technology; systems are damaged resulting in intermittent service. Use of amateur radio, internet, people as "runners" and text messaging is common.
- The City's Joint Information Center (JIC) has been activated and plans are being considered for a regional JIC.
- Vehicles cannot cross the Columbia River: the I-5 Bridge, I-205 Bridge, and Boone Bridges are not available due to damaged ramps.

### **Energy**

- Major petroleum pipelines serving the City of Portland and the State of Oregon have been severed. Response crews have identified the cut and are repairing it. The extent of the damage is unknown; the return time to operation is unknown.
- The natural gas feeder line, operated by Williams Northwest Pipeline, is broken where it connects with the NW Natural Gas pipeline in NW Portland.
- Gas stations serving the general public are closing as they run out of fuel. Police, providing security, are stationed at all City of Portland fuel sites still operating.
- The State of Oregon Fuel Allocation Program is in effect. Fuel is distributed by the State in accordance with the program: Tier 1, Tier 2, and Tier 3. Tier 1 includes law enforcement, fire services and medical services (ambulances, air transport, and hospitals).
- Electricity has been restored to portions of NE Portland in the Rose Quarter.
- Refineries in Washington are down; it will be at least two weeks before they are restored and able to send out fuel.

### **Population Protection**

- The NW Portland Industrial Area includes industry and some residential areas. Most industry is closed, with limited staff. Residential populations are displaced.
- Most of the population is displaced. Of note, residential and business areas in NW Portland and in downtown Portland have suffered considerable damage with collapsed buildings, landslides, fires, explosions, etc.
- Businesses and industry are having difficulty accessing their properties due to debris in streets and exclusionary areas (set up by the DPC) in downtown.

### **Mass Care/Emergency Assistance**

- Mass care sites have been established in parks near Legacy Good Samaritan; Providence St. Vincent, and Legacy Emanuel hospitals. Parks near Emanuel:

- Dawson Park and Lillis-Albina Park; parks near Providence Portland Medical Center: Frazer Park and Normandale Park (north of I-84) and Laurelhurst Park (south of I-84); parks near Legacy Good Sam: Wallace Park and Waterfront Park.
- American Red Cross has located shelters throughout the City: EXPO Center; Memorial Coliseum in NE Portland; Consolidated Freightways parking lot in NW Portland; Gabriel Park in SW Portland; and Lents Park in SE Portland. The capacity of the shelters is 50,000 people. Power is by back-up generator at the EXPO Center and all other sites, except Memorial Coliseum which has electricity (now restored). Security is not yet available.
- Oregon Food Bank in NE Portland is losing its frozen foods to spoilage due to lack of generator fuel for their freezer. They cannot distribute food due to lack of access to fuel for vehicles.

### **Public Health and Medical Services**

- Generators are in use for all hospitals (listed previously). Of note, OHSU and Good Samaritan are very damaged.
- The Regional Hospital at OHSU is operational.
- Medical care points have been established at parks near Good Samaritan; Providence, and Emanuel hospitals. These are different sites than the mass care sites. The parks near Emanuel: Overlook Park and Irving Park; parks near Providence Portland Medical Center: Rose City Park (north of I-84) and Mt. Tabor Park (south of I-84); parks near Good Samaritan: Couch Park and South Park Blocks. Hillsdale and Hamilton Parks in SW Portland are also medical care points.
- Life Flight Network LLC helicopters are in use.

### **Resource Management**

- Critical resource shortfalls are being prioritized by the City, other jurisdictions, and non-profits. The City is coordinating with Multnomah County to assess non-traditional mutual aid.
- A hotline has been set up to take calls for available donations, resources, information and needs.
- Resource delivery is limited due to impaired transportation system.
- Fuel is unavailable to the general public.
- Retail stores are seeking advice about distribution of products that could become damaged because of the electrical outage.

### **Public Works**

- Damage assessment teams, certified in ATC 20, are reviewing infrastructure in accordance with City of Portland protocol. Essential facilities are the first priority.
- Assessments of infrastructure: 35% of water and sewer system capacities are damaged and 10% of parks facilities cannot be occupied.

#### **Water**

- Water Bureau is conducting damage assessment on their infrastructure that passed the Tier I review.
- Due to the broken water lines that have caved in 5<sup>th</sup> Ave in downtown Portland, water lines are being assessed for repair priority.
- The Emergency Operations Plan is being implemented.

#### **Sewer**

- Sewage is flowing into the Willamette River due to overloaded wastewater system from broken pipes.

## **Firefighting**

- Water system damage has caused delay to fire fighting in downtown area.
- Fire Station 1 (SW Front and SW Ash) remains operational, serving the downtown core. It would rely on a diesel-powered back-up generator if needed. All other fire stations, however, are impacted by natural gas pipe breakages. Each of those fire stations uses a gas-powered back-up generator.
- Diesel locations for truck fueling are being identified.
- Search and Rescue efforts are focused on downtown Portland and OHSU.
- Fire staff uses vehicles, boats, barges, and other modes of available transportation to travel around the city to perform their duties.

## **Public Safety and Security**

- Fueling for police vehicles is limited as 1<sup>st</sup> street garage is severely damaged; the fuel tanks are buried. There are a limited number of vehicles and bicycles available. Fuel is being distributed through the Fuel Allocation Program.
- A limited number of patrol cars are available due to the severe damage of the Multnomah County Justice Center at SW 3<sup>rd</sup> and SW Main streets.
- Law enforcement officers are needed for crowd control at the Willamette River, especially around the Burnside Bridge, the main bridge in use within the City.
- Security services are needed through the City to prevent looting and monitor the public in parks and businesses such as grocery stores, camping stores etc.
- Law enforcement staff use vehicles, boats, barges, and other modes of available transportation to travel around the city to perform their duties.

## **Transportation**

- About 50% of the transportation system capacity is disabled.
- The clearing of emergency and auxiliary transportation routes is prioritized.
- Bus, MAX, and streetcar systems are operating on a limited basis. The airport is functional. Railroad tracks are damaged; this greatly impairs the ability of Amtrak and Union Pacific to operate.
- Bridges, overpasses and on-ramps are still being assessed. 1/3 of the City-owned bridge infrastructure is damaged and impassable (50 City-owned bridges).
- Major bridges owned by Multnomah County and the State of Oregon are inoperable except for the Burnside Bridge. The Marquam Bridge, Sauvie Island Bridge, Steel, Hawthorne, Ross Island, Abernethy, Broadway, and Morrison Bridges are damaged. The Fremont Bridge ramps are no longer standing. The Sellwood Bridge is severely damaged with the majority of it in the river.
- The I-5 Bridge across the Columbia River, the I-205 Bridge and the Boone Bridge are also damaged. None of the ramps is stable enough to use.
- The Northwest Industrial Area is an island; Kitteridge and Yeon overpasses have collapsed, St. Johns Bridge east side ramp is collapsed and there are landslides on Hwy 30.
- I-84 connection from I-5 is still closed due to overpass failure at 12<sup>th</sup> Ave.
- Reserve resources of fuel are still being calculated.
- Debris removal is underway.
- Military resources becoming available include helicopters, planes, and vehicles.
- Barges and boats are operating. River traffic is severely limited due to debris.

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