

Annex N: Earthquake Emergency Actions

Nature of the Hazard

The City of South Portland is subject to earthquake events.

The Cumberland County Hazard Mitigation Plan, dated December 24, 2004, notes that “The USGS Earthquake Hazards program reports a total of seven significant earthquakes in Maine over the past 100 years, all of which were felt in Cumberland County, although none were centered in the county, and none caused major damage in the immediate area”.

An earthquake measuring 7.2 on the Richer scale occurred off the coast of Newfoundland in 1929 that affected the coast of Maine. Another earthquake occurred in 1957, when a tremor occurred 20 miles off the coast of Portland, resulting in minor damage to homes (chimney damage, broken dishes, windows, etc).

The US Geological Survey (USGS) measures earthquake risk by estimating Peak Ground Acceleration (PGA), measured in “percent g”, or the percent of acceleration due to gravity. Minor earthquake damage occurs typically at 10 percent g or greater. Severe damage occurs generally at the 60% g or greater level.

To estimate risk from earthquakes, the USGS estimates the highest level of PGA, which has a 10 percent probability of being exceeded during a 50-year period. The range of values in Cumberland County ranges from 4%g to 7%g.

Risk Area

The entire city is subject to earthquakes and subsequent damage from earthquakes.

Direction and Control

If an earthquake occurs and is felt in South Portland, it is likely going to be a citywide issue, and therefore a scene-specific Incident Commander is not anticipated. The Emergency Operations Center should be activated to manage emergency response actions. The Emergency Management Director (City Manager) may designate a senior department head or the EMA Director to manage EOC operations in response to flooding conditions.

Communications

Normal city communications channels will be used to manage response to earthquake conditions. Earthquake events are not likely to overload telephone, cell phone and two-way radio systems; however, some systems may be damaged and assumed to be unavailable.

Warning

Earthquakes occur with no warning. The public will be warned as soon after an earthquake that has been felt in South Portland has occurred, via methods described in the All Hazards Emergency Plan, including use of the EAS system, use of police officers and firefighters using bullhorns and other devices, using the emergency warning system designed for the hard of hearing and other means. Warning messages and methods will be coordinated by the EOC staff, if activated.

Emergency Public Information

Emergency Public Information (EPI) will be issued as necessary by the EOC staff, through the Public Information Officer (PIO). Methods of EPI dissemination include using the TV camera mounted in the Joint Information Center (JIC). This JIC camera is connected to the SPC TV broadcast studio at City Hall, allowing emergency instructions to be broadcast through SPC TV to about 12,000 households in South Portland and Cape Elizabeth

News releases will be developed as needed by the PIO, approved by the EOC Manager, and then disseminated to the public through Portland area radio, TV and print media outlets as well as city website and social media sites.

Evacuation

EOC staff would determine, based on current conditions, weather forecast conditions, road conditions, and other factors, if evacuation of the public were necessary. Appropriate evacuation routes would be developed in the EOC, approved by the EOC Manager, and then broadcast to the public via the EPI system described above. A combination of police officers, firefighters, public works staff, and appropriate barricades and other traffic control devices would be employed to effect the evacuation in an orderly and timely manner.

Mass Care

EOC staff will determine if mass care facilities should be opened and manned. The primary mass care facility in South Portland is the Community Center on Nelson Street, behind the South Portland High School. Approximately 1,000 evacuees can be processed in this mass care facility. Other city facilities, including the High School, and both Middle Schools can be used as mass care shelters.

Health and Medical Concerns

The Portland Water District may be contacted to ensure the safety of the drinking water supply. Local officials may mandate “boil water” orders for those on well water systems or others as determined necessary. If massive damage occurs to one or more sections of the city, then the Mass Casualty Incident (MCI) Plan may be implemented. Local medical resources are deemed to be adequate to deal with earthquake victims.

Resource Management

Local resources are considered inadequate to deal with earthquake events. If additional resources are needed, Cumberland County Office of Emergency Management will be contacted by the South Portland EOC and requested to facilitate the procurement of additional needed resources.

Specific Actions for Earthquake Events

Fire Department Actions

- Implement SOGs as necessary.
- Assess damage with the Police Department and other city agencies, looking for victims, structural damage and other earthquake related problems.
- Implement actions as requested by the EOC.

Police Department Actions

- Assess damage with the Fire Department and other city agencies, looking for victims, structural damage and other earthquake related problems.
- Test all communications systems and determine which systems are inoperable or degraded.
- Implement actions as requested by the EOC.

Public Works Actions

- Assess damage with the police and fire departments, helping clear debris, inspecting roads, bridges, culverts, etc. for damage.
- Implement actions as requested by the EOC.

EOC Actions

- Staff up as quickly as possible and establish post earthquake priorities, including victim assistance and damage assessment.
- Evaluate the condition of essential city services (police, fire, public works, schools, buildings, transportation, roads, communications systems, traffic lights, etc) and develop plans to compensate for any deficiencies in services.
- Open city shelters if necessary.
- Evaluate damage to other critical infrastructure facilities (water system, phone system, power grid, key employers, etc) and work with outside groups to develop system restoration plans as needed.
- Conduct damage assessment in concert with CCEMA and MEMA officials.