

## **INCIDENT ANNEX 5**

### **EARTHQUAKE RESPONSE PLAN**

**ICS FUNCTION:** Operations

**LEAD:** Island County Department of Emergency Management (DEM)

**SUPPORT:** Island County Public Works  
Island County Sheriff  
Amateur Radio, RACES/ARES  
American Red Cross, Snohomish County Chapter  
Puget Sound Energy  
Cascade Natural Gas

#### **I. INTRODUCTION**

##### **A. PURPOSE**

To provide instructions and standard processes for warning, response, and recovery from the effects of a damaging earthquake affecting Island County.

##### **B. SCOPE**

This annex addresses response during and immediately after a damage producing earthquake and the planned recovery actions. This annex will not address seismic mitigation measures in building codes, land use planning, or continuing public preparedness education. Damage assessment is covered in ESF #14, Recovery.

#### **II. POLICY**

**A.** Island County strongly encourages personal, family, and business emergency preparedness plans. During and after a damage producing earthquake, County emergency response resources will be primarily devoted to immediate life safety actions, incident stabilization, and the protection/recovery of public infrastructure including roads, streets, and other public facilities/utilities.

- B.** Business and private property owners need to plan for specific insurance coverage for structures and contents before an emergency occurs. Likewise, personal and family emergency plans should include food, water, prescription medicine, and heating and shelter support for at least 72 hours, if not longer.

### **III. PLANNING ASSUMPTIONS**

- A.** The inability to predict or provide timely warning for earthquakes means that all earthquake planning is reactive or responsive.
- B.** Those portions of Island County located on formerly wetland or filled areas or on lowlands now behind dikes are highly susceptible to damage from ground movement and soil liquefaction.
- C.** Seismic damage to dikes and other drainage structures followed by high winter tides could lead to localized flooding and require evacuation.
- D.** The secondary effects of a damaging earthquake such as fire, injury, building collapse, search and rescue, and hazmat-release (natural gas leaks, sewage release, other industrial HAZMAT) ) will be addressed according to plans and processes already defined for those hazards or incidents.
- E.** County emergency response resources and Public Works will not be adequate to deal simultaneously with all the immediate consequences of a damaging earthquake – individual citizens should be prepared to take care of themselves and their families for 72 hours or longer.
- F.** Severe economic consequences will result from an extended loss of electrical power, water and sanitation systems, natural gas service, or a combination of these. The inability to open businesses, provide fuel or natural gas, prepare food, provide clean water, and maintain sanitation will immediately and seriously impact hospitals, business, schools, and adult care facilities.

### **IV. CONCEPT OF OPERATIONS**

- A. Initial Actions for Everyone.** When an earthquake is felt:

Everyone should stop what they are doing and **DROP, COVER,** and **HOLD** on to some large object.

1. If you are driving, stop your vehicle in a safe location and wait until the shaking stops.
2. After the shaking stops, evacuate buildings and wait for aftershocks. Move well away from buildings, brick walls, and overhead signs, lights, and power lines.
3. If safe to do so, shut off gas or water lines, treat all downed lines as “live electric hazards.” Put-out small fires, if safe to do so.

**B. County Employees**

1. If at home, take care of families and then report to the County EOC or your normal workplace. If you cannot report to your county workplace, attempt to call your department or the County EOC and report your status, location, and a contact telephone number. You may also report to the nearest Public Works Road Shop or Sheriff’s precinct and wait further instructions or work assignment.
2. If you are at work, account for other employees, treat injuries, evaluate the stability of your building and utilities.

If you smell gas, give the warning and leave the building immediately, assist others if possible.

If water pipes are leaking, shut off the water or call facilities maintenance if possible.

Avoid water on floors near any electrical equipment.

3. Check for electrical safety and fires. Shut off power if safe to do so, otherwise leave the building immediately. Do not re-enter any building that is not standing straight or has obvious structural damage.

4. When safe to do so, move any vehicles and wheeled equipment out of garages and shops. Park them at a safe distance (1.5 times building height) away from any buildings.
5. Re-enter only safe buildings. Stay off telephone and NEXTEL except to call for medical help for injuries. Listen to commercial radio or TV for emergency announcements and instructions, Monitor available radios for instructions and information.

**C. Response and Recovery**

1. Earthquake Response Phase

- a. The Earthquake Response Phase begins when the earthquake occurs and continues until all immediate life safety and public infrastructure issues have been responded to and cleared. This phase may include opening of the County EOC, initial reporting of damage and utility outages, and shelter operations. A formal emergency or disaster declaration may be required then or at a later date.
- b. Following a “felt” earthquake of any size, the EOC will be opened to take initial report and determine the level of damage if any and initiate additional emergency response actions.
- c. The consequences of an earthquake may include fires, hazardous material releases, flooding, and the need for search, rescue, large scale evacuation, and sheltering. Planned response actions for these types of emergencies are covered on other parts of the CEMP.

2. Recovery Phase

The Recovery Phase begins when all new threats to life and property have stopped. Recovery operations will include “windshield survey” reports, initial damage reporting for EMD, continued debris removal, utility restoral, and shelter closing. The decision to formally declare an emergency or disaster may be part

of this phase.

- a. General recovery actions are discussed in ESF #14, Recovery. Recovery actions consist primarily of two parts overlapping in time. Part 1 is restoral and return to service of public facilities, services, utilities, clean-up of businesses and residences, and the removal of debris.
- b. Part 2 is the implementation of a process to accurately collect and document public and private (including business) damage assessments. This process is critical to future efforts to recover costs associated with the emergency or disaster. The collection of damage assessment information is complex and requires specific information within a short period of time. Damage estimation and documentation is addressed in ESF #14.

## **V. RESPONSIBILITIES**

### **A. Island County DEM (IC DEM)**

1. After the earthquake, IC DEM will operate the EOC at the appropriate level, maintain a chronological log of incident events, and coordinate for resources. IC DEM will provide the County PIO with information for media releases. IC DEM will activate emergency communication as necessary and coordinate with the Red Cross for any sheltering needs.
2. After the earthquake, IC DEM will coordinate recovery actions. Information packets will be made available in areas most impacted. Finally, IC DEM will manage the process for collection of damage assessments, document and report city recovery actions, and coordinate with Washington State EMD for damage surveys.
3. As necessary, IC DEM will coordinate with the law enforcement and other organizations to use vehicle mounted public address systems to provide warnings and critical safety information about fire, electrical, health, and other post earthquake hazards in damaged areas.

4. A telephone information line will be established and staffed to provide current information. Additionally, recovery information will also be placed on the County web pages, in newspapers, and other mass media.

**B. Other County Departments:**

1. Each department with separate buildings or structures:
  - a. Following an earthquake account for all employees, inspect buildings implement building evacuation until safety of the structure can be determined.
  - b. Implement earthquake or other disaster plans including the inspection and testing of emergency power generators, emergency lights, flashlights, and generator fuel status.
  - c. Implement continuity of operations (COOP) plans.
3. Planning and Community Development:
  - a. Identify and mark unsafe structures, beginning with public structures and businesses.
  - b. Coordinate emergency permitting and inspection processes for public and private property recovery work to ensure compliance with safety, environmental, and fire standards.
4. Public Works:
  - a. Implement earthquake or disaster plans, account for all personnel.
  - b. Designate a Public Works (PW) EOC liaison.
  - c. Implement continuity of operations (COOP) plans.
  - d. Conduct damage surveys and assessments. Document all

damage and emergency work with digital photographs and GPS locations.

- e. Closely document all emergency work under an assigned unique work order including equipment and materials used, fuel consumed, worker overtime, tipping fees and number or volume of debris loads.
- f. Request emergency health, hydraulic, and environmental permits for recovery work.

4. Sheriff

- a. Implement earthquake or disaster plans and account for all personnel.
- b. Secure the County Jail and juvenile facility. Implement facility emergency plans.
- c. Secure weapons and tactical equipment. Coordinate road closure and debris information with PW-Roads, and ICOM. Emphasize reporting of debris and blocked roads, power outages, power lines, and possible electrical and fire hazards.
- d. Coordinate any evacuation support with EOC.
- e. Request mutual aide as necessary.
- f. In coordination with Fire and PW establish and enforce safety/security perimeters. Increase security patrols.

5. Island County Public Health Department:

- a. Provide emergency water treatment guidance. Assist with water quality testing.
- b. Monitor the impacted area for signs of water/food related infection or illness.

- c. As necessary, inspect potable water and water treatment systems including septic systems. Inspect/monitor flooded areas, surface water, and shorelines for contamination.

**C. Non-County Organizations**

1. Island County Chapter-American Red Cross

- a. Implement disaster response plans. Based on information available, assess shelter needs and possible locations. Alert disaster teams.
- b. Prepare for people using electric medical equipment (ventilators, dialysis, etc).
- c. Ask Island County DEM to designate amateur radio emergency support to the chapter headquarters and to any shelters as necessary.
- d. Identify a Red Cross liaison to the county EOC when activated.

3. School Districts

- a. Review and update earthquake and emergency plans.
- b. Coordinate PIO releases with the Island County PIO or Joint Information Center.

**VI. REFERENCES**

- A. Island County CEMP, ESF's 4, 6, 9, and 14
- B. Island County CEMP, Incident Annex 4, Evacuation

**TABS**

- A. Typical Post-Earthquake Checks for Individuals and Private Property Owners



**INCIDENT ANNEX 5  
TAB A**

**Typical Post-Earthquake Checks for Individuals and Private Property Owners**

**Taken from the Centers For Disease Control Web-site, complete text at:  
<http://www.bt.cdc.gov/disasters/earthquakes/after.asp>**

**AFTER AN EARTHQUAKE**

Be prepared for additional earth movements called "aftershocks." Although most of these are smaller than the main earthquake, some may be large enough to cause additional damage or bring down weakened structures.

Because other aftereffects can include fires, chemical spills, landslides, dam breaks, and tidal waves, be sure to monitor your battery-operated radio or TV for additional emergency information.

**INJURIES**

Check for injuries. Do not attempt to move injured or unconscious people unless they are in immediate danger from live electrical wires, flooding, or other hazards. Internal injuries may not be evident, but may be serious or life-threatening. If someone has stopped breathing, call for medical or first aid assistance immediately and begin CPR if you are trained to do so. Stop a bleeding injury by applying direct pressure to the wound. If you are trapped, try to attract attention to your location.

**CHECKING UTILITIES**

An earthquake may break gas, electrical, and water lines. If you smell gas: (1) open windows; (2) shut off the main gas valve; (3) do not turn any electrical appliances or lights on or off; (4) go outside; (5) report the leak to authorities; and (6) do not reenter the building until a utility official says it is safe to do so.

- If electric wiring is shorting out, shut off the electric current at the main box.
- If water pipes are damaged, shut off the supply at the main valve.

## **OTHER PRECAUTIONS**

- Have chimneys inspected for cracks and damage. Do not use the fireplace if the chimney has any damage.
- Check to see if sewage lines are intact before using bathrooms or plumbing.
- Do not touch downed power lines or objects in contact with downed lines. Report electrical hazards to the authorities.
- Immediately clean up spilled medicines, drugs, flammable liquids, and other potentially hazardous materials.
- Stay off all telephones except to report an emergency. Replace telephone receivers that may have been knocked off by the earthquake.
- Stay away from damaged areas. Your presence could hamper relief efforts, and you could endanger yourself.
- Cooperate fully with public safety officials. Respond to requests for volunteer assistance from police, fire fighters, emergency management officials, and relief organizations, but do not go into damaged areas unless assistance has been requested.

## **EVACUATING YOUR HOME**

If you must evacuate you home:

- Post a message, in a prearranged location known only to family members, indicating where you have gone.
- Confine pets to the safest location possible and make sure they have plenty of food and water. Pets will not be allowed in designated public shelters.
- Take vital documents (wills, insurance policies, etc.), emergency supplies, and extra medications with you.