Fire Safety and Utility Controls

CERT Basic Training
Unit 7
Unit Objectives

- Explain role of CERTs in fire safety
- Identify and reduce potential fire and utility risks
- Describe CERT sizeup process
- Conduct basic sizeup for a fire emergency
- Explain basic safety precautions
- Identify hazardous materials
- Extinguish small fires using a fire extinguisher
Disasters that can effect our area.

- Disasters are relatively unexpected, emergency personnel may be overwhelmed, lives, health, and the environment are endangered.
- Disasters consist of Natural, Manmade, Technological.

**Natural:** Earthquakes, winter storms, landslides, Seiche, tsunamis, volcanoes, flooding, (pandemics), power outages.

**Manmade:** Terrorist attacks, hazardous material spills, large scale accidents, etc.

**Technological**
An Earthquake is a sudden slipping or movement of a portion of the Earth’s crust, caused by a sudden release of stresses, usually less than 25 miles below the surface.

Subduction Zone (Cascadia) - (Juan de Fuca Plate diving under the North American Plate) Mega Quakes (like Chile) happens approx. every 300 years. Last one struck in 1700

Deep (Juan de Fuca Plate) – Happens every 30 -50 years (1949, 1965, 2001)

Crustal Faults (Seattle Fault Zone )— (900 AD, 1872)
Active faults in the Puget Lowland

Puget Sound has thousands of small quakes every year! (< M3)
BE PREPARED TO TAKE CARE OF YOURSELF, YOUR FAMILY FOR 7 DAYS

Prepare before a disaster: 7 days (House Kit, Car Kit, Work Kit)

- Know where your water shut off is, how to turn off your gas, circuit box and most of all — Know your neighbors!

Mercer Island www.mercergov.org/emergencyprep

Take safety precautions during a disaster.

Drop/ Cover/ Hold

Take care of yourself, family, home and Pets.

- Dress for safety: Heavy soled shoes, leather gloves, hard hat, flashlight.
- If you smell gas shut off gas. (make sure you have a wrench, know how and where the meter is at)
- Turn off electrical at circuit box
- Shut off water at main house valve or at main valve at street
- Call out of state contact to check on family members if phone systems are disrupted locally.
- Tune into KIRO radio station (KIRO 710AM) or MIHS Radio station 88.9FM or 94.5FM with battery operated radio for info.
- Check on neighbors to see if OK
- If willing, volunteer at your city to assist those in need. (206-275-7600 – EOC Phone Number)
  - if you are off Island, have you planned for someone to take care of your kids/ family if you can't get back on the Island?
  - Kit in your house, car, workplace?
  - Wrench on gas meter? Know how to turn off your utilities, water?
  - Fire Extinguishers in house? Smoke detectors working?

Currently One shelter site, the community center at Mercer View 8236 SE 24th (Goal for 2013 south end shelter)

Faith community may assist with additional warming / cooling areas — signs will be posted at intersections for further information.
Mercer Island Volunteers

230 active Volunteers

• Volunteers contacted for activation.
• Volunteers meet at City Hall Court Room for check in.
• Volunteer will receive badge (if don’t already have one) Lime green vest and be placed into teams below:

- Medical
- Mortuary services
- Search & Rescue
- Sheltering
- Food Services
- Mental Health
- Child Care
- Senior Care
- Animal Shelter
- Well Operations
- Damage Assess & Windshield Survey
- HAM Radio
- Resource acquisition and tracking
- Transportation
- Administration
Priorities in any disaster

- Life Safety
- Property
- Environment

Medical Tagging

- Black / white tape: Dead
- Red tape: critical
- Yellow tape: injured
- Green tape: OK

Building Operational Status

- **Red**: No Entrance to Structure - Critical
- **Yellow**: Limited Entrance - Critical Functional
- **Green**: Normal Operations – Structure OK
Unit Topics

- Fire chemistry
- Fire and utility hazards in the home, workplace, and neighborhood
- CERT sizeup
- Fire sizeup considerations
- Firefighting resources
- Fire suppression safety
- Hazardous materials
Role of CERTs

- CERTs play a very important role in fire safety by:
  - Extinguishing small fires
  - Preventing additional fires by removing fuel sources
  - Shutting off utilities
  - Assisting with evacuations, when necessary
CERT Priorities

- Help in emergencies before professional responders arrive
- Rescuer safety is number one priority
  - Always work with a buddy
  - Always wear safety equipment

CERT Goal:
Do the greatest good for the greatest number
The Fire Triangle

- Heat
- Fuel
- Oxygen

Chemical Reaction

Heat

Fuel

Oxygen
5 Classes of Fire

- A: Ordinary combustibles
- B: Flammable and combustible liquids
- C: Energized electrical equipment
- D: Combustible metals
- K: Cooking oils
Reducing Electrical Hazards

- Avoid the “electrical octopus”
- Don’t run cords under carpets
- Check for and replace broken or frayed cords
- Maintain appliances
Electrical Emergencies

- Know where power shutoffs are for:
  - Appliances
  - Circuit breakers
  - Fuses
- Post shutoff directions next to all utilities
- Know procedures for turning power back on
Shutoff Procedures

- Fuse box with shutoff
- Circuit box with shutoff
Natural Gas Hazards

- Asphyxiant
  - Robs body of oxygen
- Explosive
  - Can easily ignite
Natural Gas Hazard Awareness

- Install natural gas detector
- Install carbon monoxide detector in home
- Test batteries for natural gas and carbon monoxide detectors every month
  - Change batteries every 6 months
- Locate and label gas shutoffs
  - Have proper non-sparking tool
Gas Shutoff

- Locate and label gas shutoff valves
- If not automatic, know procedures for shutting off gas
L.I.E.S.

- Always read labels
- Use L.I.E.S. storage procedures (Limit, Isolate, Eliminate, Separate)
CERT Sizeup

1. Gather Facts
2. Assess Damage
3. Consider Probabilities
4. Assess Your Situation
5. Establish Priorities
6. Make Decisions
7. Develop Plan of Action
8. Take Action
9. Evaluate Progress

REMEMBER:
CERT SIZEUP IS A CONTINUAL PROCESS
CERT Fire Sizeup

- Helps responders decide:
  - Whether to attempt to suppress a fire
  - A plan of action
- Answers these questions:
  - Do my buddy and I have the right equipment?
  - Are there other hazards?
  - Is the building structurally damaged?
  - Can my buddy and I escape?
  - Can my buddy and I fight the fire safely?

Remember: The safety of individual CERT members is always the top priority.
Firefighting Resources

- Portable fire extinguishers
- Wet standpipes
- Confinement
- “Creative” resources
Fire Extinguishers

- Water
- Dry chemical
- Carbon dioxide
- Specialized fire extinguisher
Extinguisher Rating/Labeling

- Labels show types of fires that extinguisher is used for:
  - Class A fire ratings: 1A to 40A
  - Class B fire ratings: 1B to 640B
- Higher number on label = greater amount of extinguishing agent
Examples of Labels

![Example of a fire extinguisher label](image)

- Underwriters Laboratories (UL)
- Listed
- Dry chemical fire extinguisher
- Classification: 1-A: 10-BC
- Tested to ANSI/UL 711 and ANSI/UL 207
- Marine Type: U.S.C.G. Type B C Size
- Equipment No. 162 028 EX-1009
- Mounted with bracket No. 1407
Test the extinguisher after pulling the pin.
Interior Wet Standpipes

- Usually in commercial buildings or apartments
- Work in two-person teams when using wet standpipes
Fire Suppression Safety

Safety of individual CERT members is top priority
Fire Suppression Don’ts

- Don’t get too close
- Don’t try to fight a fire alone
- Don’t try to suppress large fires
- Don’t enter smoke-filled areas
Hazardous Materials

- Corrode other materials
- Explode or are easily ignited
- React strongly with water
- Are unstable when exposed to heat or shock
- Are otherwise toxic to humans, animals, or the environment through absorption, inhalation, injection, or ingestion
Identifying Stored Hazmats
The White Quadrant

- **NFPA 704 Diamond White Quadrant:**
  - \( \mathbb{W} \): Shows unusual reactivity with water
  - OX: Possesses oxidizing properties
STOP!
Hazmats in Transit

Orange
Red
White
Red & White

Explosives 1.1*
Flammable Gas 2
Inhalation Hazard 2
Flammable 3
Flammable Solid 4
Spontaneously Combustible 4
Dangerous When Wet 4
Oxidizer 5.1
Poison 6
Radioactive 7
Corrosive 8

Red & White
Blue
Yellow
White
Yellow & White
Black & White
UN and NA Placards

OXIDIZER

Chemical Class: 5.1
Name
Symbol

1203

Chemical Number
Symbol

Chemical Class: 3
Remember!
All hazardous material placards are a stop sign for CERTs
You should know:

- Keys to effective fire suppression
- CERT sizeup and fire sizeup considerations
- Classes of fire and types of fire extinguishers
- P.A.S.S.
- How to identify hazardous materials

Always follow the safety rules established for CERTs – personal safety comes first!
Homework Assignment

1. Read unit to be covered in next session
2. Bring necessary supplies to next session
3. Wear appropriate clothes to next session
NIMS Compliance

Highly recommended that volunteers complete the following online courses.

Print and keep a copy of your certificate when you complete the test. FEMA does not keep records of who takes these classes.

Links to Online Classes:

IS-700.A NIMs Introduction
http://www.training.fema.gov/EMIWeb/IS/is700a.asp

IS-100.b
http://www.training.fema.gov/EMIWeb/IS/IS100b.asp
### Mercer Island Volunteer Training
#### Community Emergency Response Teams

**CERT Training**
with Mercer Island Additions

206-275-7905 or [jennifer.franklin@mercergov.org](mailto:jennifer.franklin@mercergov.org)
[www.mercergov.org/emergencyprep](http://www.mercergov.org/emergencyprep)

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**2012 Volunteer Training Schedule**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturday March 17, 2012</td>
<td><em>Basic Disaster Prep</em></td>
<td>0900-1200</td>
<td>Council Chambers</td>
</tr>
<tr>
<td>Saturday April 14, 2012</td>
<td>Well operation</td>
<td>0900-1200</td>
<td>Well site 4320 88th</td>
</tr>
<tr>
<td>Saturday May 19, 2012</td>
<td>*CERT Org./ Communications</td>
<td>0900-1200</td>
<td>Council Chambers</td>
</tr>
<tr>
<td>Saturday June 16, 2012</td>
<td><em>Disaster First Aid</em></td>
<td>0900-1200</td>
<td>Council Chambers</td>
</tr>
<tr>
<td>Saturday July 21, 2012</td>
<td>Damage Assessment</td>
<td>0900-1200</td>
<td>Council Chambers</td>
</tr>
<tr>
<td>Saturday August 18, 2012</td>
<td><em>Search &amp; Rescue</em></td>
<td>0900-1200</td>
<td>North Fire Station</td>
</tr>
<tr>
<td>Saturday October 20, 2012</td>
<td>*Fire Suppression Training</td>
<td>0900-1200</td>
<td>Council Chambers</td>
</tr>
<tr>
<td>Saturday November 17, 2012</td>
<td><em>Disaster Mental Health</em></td>
<td>0900-1200</td>
<td>Council Chambers</td>
</tr>
<tr>
<td>Saturday December 15, 2012</td>
<td><em>Terrorism Response Training</em></td>
<td>0900-1200</td>
<td>Council Chambers</td>
</tr>
<tr>
<td>Saturday January 19, 2013</td>
<td><em>Final Test / Graduation</em></td>
<td>0900-1200</td>
<td>Council Chambers</td>
</tr>
<tr>
<td>February 2013</td>
<td>Red Cross Shelter Class</td>
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<td></td>
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</tbody>
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* Denotes Class needed for CERT Certification, other classes are optional and specific to MI.
Mercer Island Emergency Phone Numbers

Call 9-1-1 only if you need an immediate response from police, fire or medics.

Utility Companies
Puget Sound Energy (24 hr): 1-888-225-5773
Seattle City Light: 206-684-7400 (24 hr Outage Hotline) or 206-684-3000

Police
Mercer Island (24 hrs): 425-577-5656

Fire and EMS
Mercer Island: 206-275-7607 (business hours) 425-577-5656 (24 hrs)

Roads, Transportation and Traffic
Travel Information: 511
Mercer Island Maintenance: 425-577-5656

Health and Human Services
Public Health: 1-800-325-6165
Washington Poison Center (24 hr): 1-800-222-1222
Crisis Clinic: 1-866-427-4747
Washington Information Network: 211
Public Health Duty Officer 206-296-4606

City of Mercer Island main number / Emergency Operation Center
206-275-7600
mercergov.org/emergencyprep

Other Services
King County Flood Warning Information Line (recorded flood phase information): 1-800-945-9263
King County Flood Warning Center (staffed only during a flood event): 1-800-768-7932
American Red Cross serving King County: 206-323-2345 or 360-377-3761
Regional Animal Services: 206-296-7387
Illegal Dumping: 1-866-431-7483 Online Reporting