Disaster Preparedness
CERT Basic Training Unit 1
Welcome and Introductions
Introduction of Training Series
Overview of Unit 1
Hazards Related to Mercer Island
Summary of Mercer Island Preparedness
Basic Disaster Preparedness
Function of CERT/ Mercer Island Volunteers
Unit Summary
Mercer Island Volunteer Training
Community Emergency Response Teams

CERT Training
with Mercer Island Additions

206-275-7905 or jennifer.franklin@mercergov.org
www.mercergov.org/emergencyprep

2012 Volunteer Training Schedule

Saturday March 17, 2012  * Basic Disaster Prep
Saturday April 14, 2012  Well operation
Saturday May 19, 2012  * CERT Org./ Communications
Saturday June 16, 2012  * Disaster First Aid
Saturday July 21, 2012  Damage Assessment
Saturday August 18, 2012 * Search & Rescue
Saturday October 20, 2012 * Fire Suppression Training
Saturday November 17, 2012 * Disaster Mental Health
Saturday December 15, 2012  * Terrorism Response Training
Saturday January 19, 2013  * Final Test / Graduation
February 2013  Red Cross Shelter Class

0900-1200 Council Chambers
0900-1200 Well site 4320 88th
0900-1200 Council Chambers
0900-1200 Council Chambers
0900-1200 Council Chambers
0900-1200 North Fire Station
0900-1200 Council Chambers
0900-1200 Council Chambers
0900-1200 Council Chambers

* Denotes Class needed for CERT Certification, other classes are optional and specific to MI.
Unit Objectives

• Identify roles and responsibilities for community preparedness
• Describe types of hazards that affect community, people, health, and infrastructure
• Undertake personal and organizational preparedness actions
• Describe functions of CERT Volunteers
Government

• Government has responsibility to:
  – Develop, test, and refine emergency plans
  – Ensure emergency responders have adequate skills and resources
  – Provide services to protect and assist citizens
The Public

- Learn about community alerts, warnings, and evacuation routes
- Take training
- Practice skills and personal plans
- Network and help others
- Give feedback to community
- Report suspicious activity
- Volunteer
Engaging the Whole Community

• Goal of Citizen Corps (CERT) and the City of Mercer Island is to make communities safer, more prepared, and more resilient.

• One way to advance this goal is through the training you will be receiving over the next 10 months.
Emergency Operations Plan

- Assigns responsibility to organizations and individuals
- Sets forth lines of authority
- Describes how people and property will be protected
- Identifies personnel, equipment, facilities, supplies, and other resources
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, Christchurch and Japan) happens approx. every 300 - 500 years. Last one struck in Washington 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)
Seattle Fault Earthquake

- Fault line runs from Harbor Island to the base of the Cascades, Mercer Island is in the fault’s direct path
  - Approximately 14 miles
  - Shallow fault line
  - Potential for significant ground movement
Seattle Fault Line
CERT Basic Training Unit 1: Disaster Preparedness
PICTURES SAY EVERYTHING


Earthquake Statistics

• 75 million Americans in 39 states face significant risk
• Residents of California face the highest risk (17 million people) followed by residents of western Washington State
• 4 million people along New Madrid Fault Zone in Missouri at great risk
• Residents of Massachusetts, North Carolina, and South Carolina also at risk
Richter Scale

- Small: 5.0 to 5.9
- Moderate: 6.0 to 6.9
- Major: 7.0 to 7.9
- Great: 8.0 or greater
Damage Caused by Earthquakes

- Collapsed buildings
- Damage to utilities, structures, and roads
- Fires and explosions
- Structural instability
Earthquake Preparedness

• Develop a home earthquake plan.
• Conduct earthquake drills.
• Develop a plan for reuniting family members.
• Identify an out-of-state family contact / Family Communication Plan.
• Keep supplies on hand.
Earthquake Preparedness

• Store heavy and breakable objects on low shelves.
• Secure bookshelves and water heaters.
• Install flexible pipe.
• Move beds away from windows.
• Move or secure hanging objects over beds, sofas, or chairs.
• Keep shoes and a flashlight under the bed.
During an Earthquake

• Drop, cover, and hold.
• If indoors, stay there!
• If outdoors, find a spot away from buildings, trees, streetlights and power lines, and overpasses.
• If in a vehicle, drive to a clear spot and stop.
After an Earthquake

• First:
  – Check selves for injuries
  – Protect selves from further danger

• Then:
  – Extinguish small fires
  – Clean up spills
  – Inspect home for damage
  – Help neighbors
  – Tune to Emergency Alert System (EAS)
  – Expect aftershocks
A Tsunami Is...

Waves produced by earthquakes and/or landslides, occurring immediately after an earthquake.

A Seisch Is:

An oscillation of water (like a bath tub effect) in a body of water.
Risks Posed by Tsunamis and Seischs
Can cause:

- Flooding or damaging of docks/boats.
- Contamination of drinking water.
- Fires from ruptured tanks or gas lines.
- Loss of vital community infrastructure.
- Complete devastation of coastal areas.
- Death
Tsunami Facts

• 24 tsunamis have caused damage in U.S. and territories during past 224 years
• Wave height ranges: inches to 100+ feet
• Tsunamis can travel upstream in coastal estuaries and rivers
  – Damaging waves as high as 60 feet extending inland from immediate coast
• First wave of tsunami is usually not largest
Tsunami Preparedness

• Know risk and “coastal clues”
• Plan and practice evacuation routes
• Discuss tsunamis with your family
• Talk to your insurance agent
• Use NOAA Weather Radio
Protecting Property

• Avoid living within several hundred feet of coastline
• Elevate coastal homes
• Consult with professional
Tsunami Preparedness

• If strong, coastal earthquake occurs:
  – Drop, cover, and hold
    – When shaking stops, evacuate quickly to higher ground away from coast, up to two miles inland
  – Gather your family
  – Leave everything else behind
  – Avoid downed power lines, buildings, and bridges
If a Warning is Issued

• If in tsunami risk area, evacuate immediately
• Follow instructions issued by local authorities
• Get to higher ground as far inland as possible
• Listen to NOAA Weather Radio or Coast Guard emergency frequency station
• Return home only after local officials tell you that it is safe
• If already out on ocean, be sure to get as far from coast as possible
A Volcano Is . . .

A vent through which molten rock escapes to the Earth’s surface.
Volcanic Hazards

- Toxic gases
- Lava and pyroclastic flows
- Landslides
- Earthquakes
- Explosive eruptions
Accompanying Hazards

- Mudflows (including lahars)
- Flash floods
- Wildland fires
- Tsunamis
- Earthquakes
Volcanic Ash

• Causes severe respiratory problems.
• Diminishes visibility.
• Contaminates water supplies.
• Causes electrical storms.
• Disrupts the operation of machinery.
• Collapse roofs.
Volcanic Eruption Preparedness

- Understand the risk.
- Talk to your insurance agent.
- Prepare a disaster supply kit.
- Develop an evacuation plan.
- Develop shelter-in-place plan.
During a Volcanic Eruption

• Follow evacuation orders.
• Avoid areas downwind and river valleys downstream of the volcano.
• If outside, protect yourself from ashfall.
• Be prepared for accompanying hazards.
After a Volcanic Eruption

• Stay away from volcanic ashfall areas.
• Clear roofs of ashfall.
• Avoid driving in heavy ashfall.
• If you have a respiratory ailment, avoid contact with any amount of ash.
A Landslide Is . . .

A rapid shift in land mass that is typically associated with periods of heavy rainfall or rapid snowmelt, and tends to worsen the effects of flooding that often accompanies these events.
Areas Prone to Landslides

• Existing old landslides.
• The bases of steep slopes.
• The bases of drainage channels.
• Developed hillsides where leach-field septic systems are used.
Winter Storms

• Range
  – Moderate snow over a few hours
  – Blizzard conditions with blinding wind-driven snow that lasts for several days

• Many winter storms are accompanied by:
  – Low temperatures
  – Heavy or blowing snow, severely reducing visibility
Winter Storm Risk

- Automobile/other transportation accidents
- Exhaustion and heart attacks
- Hypothermia and frostbite
- Asphyxiation
- House fires
Elements of Winter Storms

- Heavy snow
- Ice
- Winter flooding
- Cold
Types of Snow

- Blizzard
- Blowing snow
- Snow squalls
- Snow showers
Types of Ice

• Sleet
• Freezing rain
• Ice storm
Winter Flooding Includes . . .

• Coastal storms
• Ice jams
• Snowmelt
Effects of Cold

• Wind chill
• Frostbite
• Hypothermia
Winter Storm Preparedness

• Understand the risk.
• Prepare your home.
• Service snow-removal equipment.
• Keep vehicle’s gas tank full.
• Pay attention to warnings.
During a Winter Storm . . .

- Stay indoors and dress warmly.
- Eat and drink regularly.
- Conserve fuel.
- If outside, protect yourself from hazards.
Winter Travel

• Avoid it, if possible!

• If you MUST travel in winter weather:
  – Winterize your vehicle
  – Keep charged cell phone or two-way radio with you at all times
  – Carry disaster supply kit in your vehicle
  – If stranded, stay inside your vehicle
Pandemic Influenza
Pandemic Defined

• A pandemic is a global disease outbreak
Community Preparedness and Risk

• A community strategy can significantly delay or reduce impact of a pandemic
• A pandemic is likely to occur at least once every century
Assessing the Risk

• Groups most susceptible to pandemic:
  – Infants
  – Adults with autoimmune diseases
  – Elderly
Essential Services Disrupted

• Services may be limited or non-existent:
  – Hospitals and other healthcare facilities
  – Banks
  – Restaurants
  – Government offices
  – Telephone and cellular phone companies
  – Post offices
Food and Water Access Limited

• How to prepare:
  – Store two weeks of non-perishable food
  – Make sure that formulas for infants and any child's or older person's special nutritional needs are part of plan
Potable Water Access Limited

• How to prepare:
  – Store two weeks of water
    ♦ 1 gallon of water per person per day
    ♦ Avoid using containers that will decompose or break
Pandemic and the Workplace

• Ask your employer how business will continue
  – Discuss staggered shifts or working at home
  – Discuss on-site daycare
  – Discuss possible flexibility in leave policies
  – Discuss how much leave you can take to care for yourself or a family member

• Plan for possible loss of income
Pandemic Preparedness in Schools

• Talk to teachers, administrators, and parent-teacher organizations

• Plan now for children staying at home for extended periods of time
  – Plan entertainment and recreational activities
  – Plan home learning activities and exercises
Prevent the Spread of Disease

• Cover nose and mouth when you cough or sneeze
• Wash hands often with soap and water
• Avoid close contact with sick people
• If you get the flu, stay home
• Try not to touch eyes, nose, or mouth
Potential Treatments

• Current pandemic flu treatments are limited:
  – Vaccination
  – Antiviral medication
Sources for Reliable Information

• [www.pandemicflu.gov](http://www.pandemicflu.gov)

• Centers for Disease Control and Prevention (CDC) Hotline
  – 1-800-CDC-INFO (1-800-232-4636)

• Local and state government Web sites
  – Links are available to each state department of public health at [www.pandemicflu.gov](http://www.pandemicflu.gov)
Issues to be aware of…..

• No hospital on the Island, medical clinics only.
• No airport, only way off the Island if boats are compromised is helicopter, kayaks, rafts.
• After business hours 3 police officers and 8 fire fighters are the only public safety employees on duty.
• 6 City staff live on the Island.
• Interruption to the flow of needed supplies due to bridge closure
• Victims unable to call for help due to lack of phone service / power.
• Loss of utilities
• Increased risk of fire or electrical shock
• Loss of contact between victims and service providers
• Currently one shelter site at Community Center at Mercer View
  — Animal shelter located in Annex A of CCMV

• Most preschools do not have generators or supplies for 7 days.
• We do not have the resources for reunification of individuals that want to leave the Island or individuals that want to get back on the Island.
Results of Damage to Infrastructure

- Police: address incidences of grave public safety
- Firefighters: suppress major fires
- EMS personnel: handle life-threatening injuries
- Lower priority needs met in other ways
Hazards Related to Structure Type

• You may not have opportunity to select type of structure when a disaster occurs
• Engineered buildings have performed well in most types of disasters
• Types of damage vary by structure
• Differences in hazards and mitigation between single-family homes and multiple-unit dwellings
Hazards from Home Fixtures

• Gas line ruptures
  – Displaced water heaters or ranges

• Damage
  – From falling books, dishes, other cabinet contents

• Electric shock or injury
  – From displaced appliances, office equipment

• Fire
  – From faulty wiring, overloaded plugs, or frayed electric cords
Home and Workplace Preparedness
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 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)

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

Faith community may assist with additional warming / cooling areas – signs will be posted at intersections for further information.
Before you can help others you need to make sure you have taken care of yourself and your family...

GET A KIT FOR YOUR HOUSE, CAR AND WORK, (personalize it with needed medicines, cash in small denominations, etc.)

MAKE A PLAN FOR YOUR FAMILY (who is going to watch your kids if you can’t get home)
Home and Workplace Preparedness

**Home Preparedness:** (If you are off Island have you planned for someone to take care of your kids/family if you can’t get back on?)

- 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?

**Business Preparedness:** (You and your employees may have to stay on the Island for up to 7 days after a disaster – If your family lives off Island are they prepared to be without you? Can you take care of your employees for 7 days? How about yourself?)

- 90% of Businesses that fail to open within 5 days eventually close (FEMA)
Preparing for a Disaster

• Know local hazards, alerts, warning systems, evacuation routes, and sheltering plans
• Consider important elements of disaster preparedness
• Address specific needs for yourself and people you know
Protective Actions

• Assess situation
• Decide to stay or change locations
  – Critical early decision in disasters
• Seek clean air and protect breathing passages
• Protect from debris and signal if trapped
• Remove contaminants
• Practice good hygiene
Sheltering

• Shelter in place: sealing a room
  – Identify internal room
  – Stay for several hours
  – Store supplies

• Shelter for extended stay
  – Stay for several days or up to 2 weeks
  – Store emergency supplies

• Mass care or community shelter
  – Take 3-day disaster kits
  – Shelters provide most supplies
Develop a Disaster Plan

• Where will you meet family members?

• Who is your out-of-State “check-in” contact?

• Will you have an extended stay? Shelter in place? Evacuate?

• How will you escape your home? Workplace? School? Place of worship?

• What route (and several alternates) will you use to evacuate your neighborhood?

• Do you have transportation?

• Did you practice your plan?
Escape Planning

• Consider needs of children and individuals with disabilities
• Inform all family members or office coworkers of the plan
• Run practice escape drills
Preparing for a Disaster

• Mitigation is the reduction of loss of life and property by lessening the impact of disasters
  – Any activity that prevents an emergency or reduces effects of hazards

• CERT members should have adequate homeowners coverage
  – Add flood insurance if in a flood hazard area
Non-structural Hazard Mitigation

• Anchor heavy furniture
• Secure appliances and office equipment
• Install hurricane storm shutters
• Childproof cabinet doors
• Locate and label gas, electricity, and water shutoffs
• Secure water heaters and have flexible gas lines installed
Other Mitigation Measures

- Bolt houses to foundations
- Install trusses or hurricane straps to reinforce roof
- Strap propane tanks and chimneys
- Strap mobile homes to their slabs
- Raise utilities
- Build a safe room
Fortifying Your Home

• Different non-structural hazards to fortify against:
  – Home fires
  – Landslides or mudslides
  – Wildfires
Get Involved

• Preparedness requires active participation from all
  – Talk to friends and family about hazards
  – Ask about emergency planning outside the home
  – Make sure those in charge have a plan

• Training provides skills needed to help others and keep skills current
  – CERT program provides training, practice, and connection to others
  – Participate in drills and exercises
  – Talk to friends and family about volunteering
CERT Disaster Response

- Respond in period immediately after a disaster
- Assist emergency response personnel when requested
- CERT members’ first responsibility is personal and family safety

- Respond after a disaster:
  - Locate and turn off utilities, if safe
  - Extinguish small fires
  - Treat injuries
  - Conduct light search and rescue
  - Help to relieve survivor stress
CERT Organization

Government Agency Liaison

CERT Incident Commander/Team Leader

- Operation Section Chief
  - Fire Suppression
  - Search & Rescue
  - Medical

- Planning Section Chief
  - Documentation
  - Incident Status

- Logistics Section Chief

- Administration Section Chief
Personal Protective Equipment

- Helmet
- Goggles
- N95 Mask
- Gloves (work and non-latex)
- Sturdy shoes or work boots
CERT in Action
Non-Disaster Roles

- Identify and aid neighbors/coworkers who might need assistance
- Distribute preparedness materials; do demos
- Staff first aid booths at special events
- Assist with installation of smoke alarms
- Parade route management
Protection for Disaster Workers

• CERT members generally protected by:
  – “Good Samaritan” laws
  – Volunteer Protection Act of 1997 - Federal law that protects volunteers from liability as long as they are acting in accordance with the training they have received.
  – Relevant State statutes
Additional Training for CERTs

- Advanced first aid
- Animal issues in disasters
- Automated External Defibrillator (AED) use
- Community relations
- CPR skills
- Debris removal
- Donations management
- Shelter management
- Special needs concerns
- Traffic/crowd control
- Utilities control
- Online courses
15 Volunteer Teams

- Medical
- Search & Rescue
- Child Care
- Animal Shelter
- Damage Assessment
- Transportation
- Administration
- Faith Community

- Sheltering
- Mental Health
- Senior Care
- Well Operations
- Ham Radio/Communications
- Resources
- Business Liaison
Unit Summary

• You should now be able to:
  – Identify roles and responsibilities for community preparedness
  – Describe types of hazards that affect community, people, health, and infrastructure
  – Undertake personal and organizational preparedness actions
  – Describe functions of CERTs
Homework Assignment

1. Review detailed information for Unit 1
2. April 14 will be Well Operation Training outside at Rotary Park. Make sure to wear appropriate clothes.
3. Get a kit for home, car and work.
4. Create family preparedness / communication plan.
5. Examine homes for hazards
NIMS Compliance

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
CITY OF MERCER ISLAND

EMERGENCY OPERATIONS ORGANIZATIONAL CHART

Duties Chart

Incident Commander

Emergency Preparedness Officer

Vol. Liaison

Public Info. Officer

Safety Officer / Legal

Operations (Do Stuff)

Police
- Protect lives
- Warning
- Communications
- Traffic Control

Fire
- ER Medical Services
- Search and Rescue
- HazMat
- Mortuary

Maintenance
- Transportation Systems
- Utilities
- Facilities

Planning (Plan Stuff)

DSG
- Hazard Mitigation
- Damage Assessment
- Windshield Survey

Info Analysis / Planning
- Situation Reports
- Charts Weather
- Significant Events

Recovery OPS
- Demobilization

Logistics (Get Stuff)

Finance
- Payroll
- Timesheets
- Supply Procurement
- Resources Unit/Inventory
- Claims/ Comp
- Recovery Ops
- EOC food support

Parks and Rec
- Mass Care Shelter
- Transportation Support

Youth and Family
- Mass Care/Shelter Support
- Food support for shelter
- Donation & Distribution

Administration (Track Stuff)

HR
- Personnel / EW tracking
- Employee Notification
- Registration
- EOC food support

Elected Officials
- Appropriate funds/ assists PIO with visiting officials/ provides staff assistance when requested

City Clerk / DSG / Finance
- Phone bank/ data entry

IT
- Computer data tracking

CERT Basic Training Unit 1: Disaster Preparedness
Mercer Island Emergency Phone Numbers
9-1-1 is for emergencies only: 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