Community Emergency Response Team

Contra Costa CERT Coalition

Preparedness

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Community Emergency Response Team

- Personal safety is ALWAYS the number one priority
- Show up prepared
  - Wear appropriate clothing and footwear, have WATER
  - Wear PPE – your personal protective equipment …gloves, helmet, goggles, mask, boots, etc.
  - Have at least one communications device: cell, radio, etc.
- Work as a team
- Size-up - maintain situational awareness
- The CERT goal is to do the **Greatest Good for the Greatest Number**
- *Hope for the best but plan for the worst!*

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Unit Objectives

- Describe the functions of CERT, discuss your role as a CERT volunteer, and explain how CERT fits into your community's emergency preparedness structure
- Describe the types of hazards most likely to affect your communities and their potential impact on people, health, and infrastructure
- Prepare yourself and your family for potential disasters your community may face, including learning to create a family disaster plan and emergency preparedness kit

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CERT Functions During Disasters

- First, check on family and home
- Then, check on neighbors
- Next, assemble in neighborhood teams and plan your response
- Use the buddy system
- Check your neighborhood
- Note your findings. You will learn more about this in Light Search and Rescue



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CERT Disaster Response

CERTs respond post-disaster by:

- Treating life-threatening injuries until professional assistance is available
- Helping disaster survivors cope with their emotional stressors
- Locating and turning off utilities, only if necessary and safe to do so
- Extinguishing small fires
- Conducting light search and rescue operations
- Assist first responders *as requested* (fire, police, EMS)

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Non-Disaster Roles

CERTs may be asked to volunteer to:

- Identify and aid neighbors/co-workers who might need assistance
- Distribute preparedness materials; do demos
- Staff first aid booths at special events
- Assist with installation of smoke alarms
- Participate in public event route management
- Help at medical or commodity Points of Distribution

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TEAM BUILDING EXERCISE

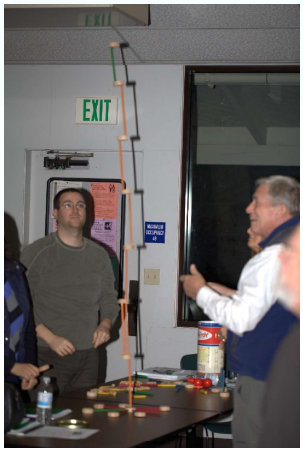
Break into groups of an equal number of team members.
Your instructor will guide you.

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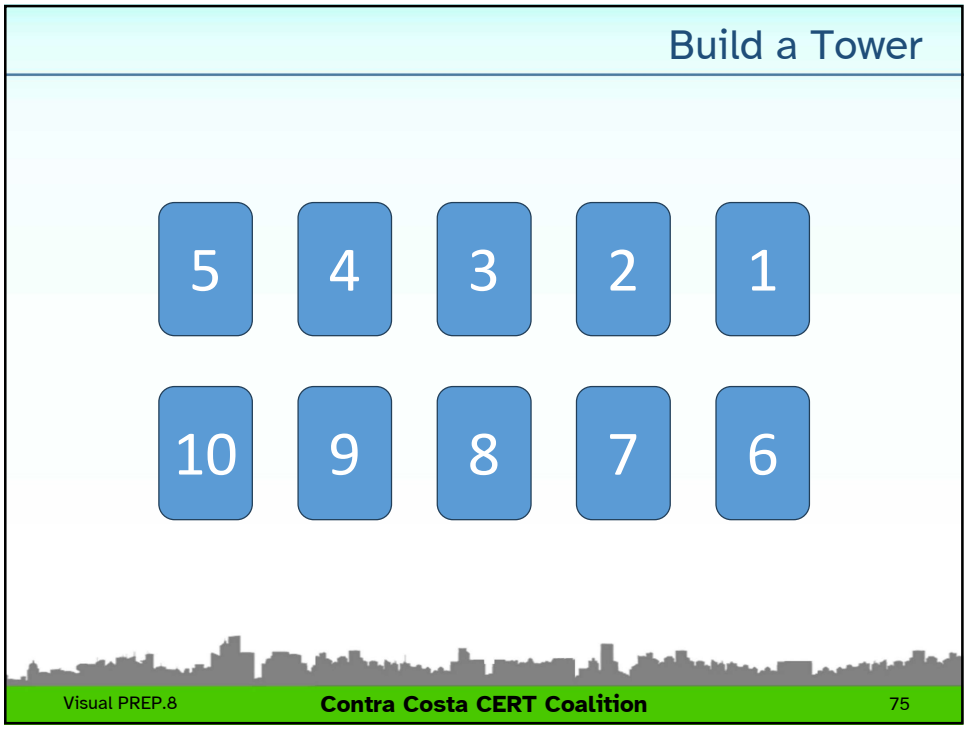
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Exercise

10 minute tower exercise



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Build a Tower
5
4
3
2
1
10
9
8
7
6
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Build a Tower
Construction is almost DONE
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Build a Tower

Which team built the tallest TOWER?



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Situational Awareness

- In this CERT series of classes, we will discuss Size-Up many times. We Size-up a situation whenever we enter an emergency scene. But, in everyday life, we should be doing a personal version of Size-up that has to do with ***Situational Awareness***
- This should become a way of life and it becomes something you don't even have to think about after a while, it's just habit



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Situational Awareness

- To be ***Situationally Aware*** is to know what is around you at all times. This is how you *minimize your risk*
- From walking down the street and watching where you are going so you don't trip over the broken sidewalk; to being aware of the cars around you while you're driving rather than focusing solely on the song on the radio and the interrupting phone call when the kids are squabbling in the back seat is being ***Situationally Aware***

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Situational Awareness

- When you enter a public building, glance around to see an alternate exit, where the fire extinguisher is located, where the AED is located. Are there any people who you want to avoid? If something bad happens, where can I get cover?
- This is not being paranoid; this quick glance is being prepared for any eventuality. This ***Situational Awareness*** makes you more likely to be a responder than a victim

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Disasters

WHAT ARE DISASTERS?



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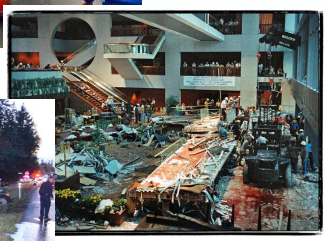
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Types of Disasters

- Natural
- Technological & Accidental
- Terrorism











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Types of Disasters

- **Natural –** Earthquakes, wildfires, pandemics, floods, extreme heat, hurricanes, landslides, thunderstorms, tornadoes, volcanic eruptions, tsunamis, winter storms
- **Technological & Accidental –** Hazardous material spill, nuclear power plant accident, building collapse, dam failure, gas line failure
- **Terrorism –** Chemical, biological, radiological, nuclear, explosive weapons

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Key Elements of Disasters

- They are relatively unexpected
- Emergency personnel will be overwhelmed
- Lives, health and the environment are in danger



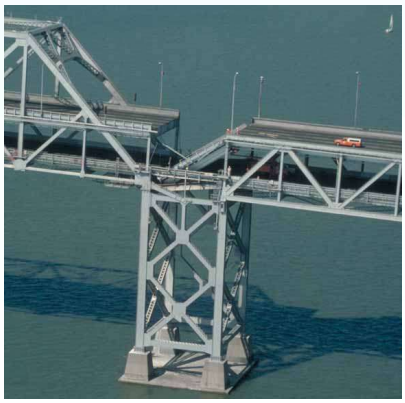
17 July 1944 Port Chicago Explosion

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Disaster Effects on Infrastructure

- Damage to transportation:
  - Police, fire, and EMS might not be able to respond quickly
  - Interruption to the flow of needed supplies





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Disaster Effects on Infrastructure

- Damage to structures:
  - Damaged hospitals unable to function normally
  - Increased risk of damage from falling debris
  - Roadway and railway damage
  - Basic necessities unavailable



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Disaster Effects on Infrastructure

- Damage to communications:
  - Home and cell phones may not work
  - Internet may be down





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Disaster Effects on Infrastructure

- Damage to water distribution system:
  - No water = No fire fighting
  - Residential water service may be down for 30 days or more



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Disaster Effects on Infrastructure

- Damage to electrical distribution system:
  - No electricity = No gasoline pumping
  - No electricity = No communications
  - No electricity = No refrigeration
  - No electricity = No water pumping
  - No electricity = No ATMs



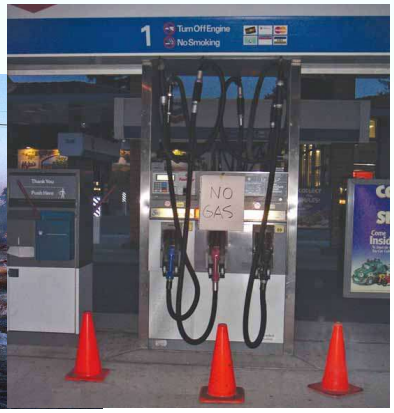
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Disaster Effects on Infrastructure

- Damage to fuel distribution system:
  - Fuel line rupture increases risk of fire or explosion
  - Fuel shortages





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Results of Damage to Infrastructure

- Police: address incidents of **grave** public safety
- Firefighters: suppress **major** fires
- EMS personnel: handle **life-threatening** injuries
- Lower priority needs are met in other ways

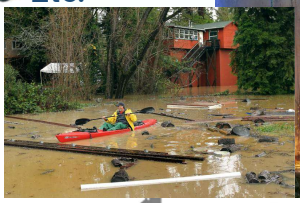
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Hazards in California

- Wildfires
- Earthquakes
- Public Safety Power Shutoffs
- Pandemic
- Floods
- Tornadoes
- Terrorism
- Etc.







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Hazards in Our Region

- Fire
- Flood
- Earthquake
- Landslide
- Tsunami
- Extreme weather
  - Rain
  - Heat
  - Cold
  - Wind
- Power outages
- Hazardous materials
- Transportation
- Malls
- Airport
- Railways
- Refineries
- Military
- Terrorist
- Others?

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What's in your neighborhood?

- Chemical plants
- Service stations
- Hospitals and clinics
- Hazardous waste sites
- Transportation
- What else?



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A primary local vulnerability: Wildfire

- Wildfire vulnerability and mitigation will be covered in the Utilities, Hazardous Materials and Fire Safety unit



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A primary local vulnerability: Earthquakes

- A violent slipping or movement of a portion of the Earth's crust resulting in a sudden release of stresses



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Why we should be prepared



- There is a 93 percent probability of at least one earthquake of magnitude 6.7 or greater striking somewhere in the Northern California region before 2043

USGS 2007 - Forecasting California's Earthquakes—What Can We Expect in the Next 30 Years?

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Earthquake Preparedness



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Earthquake Faults in our Region

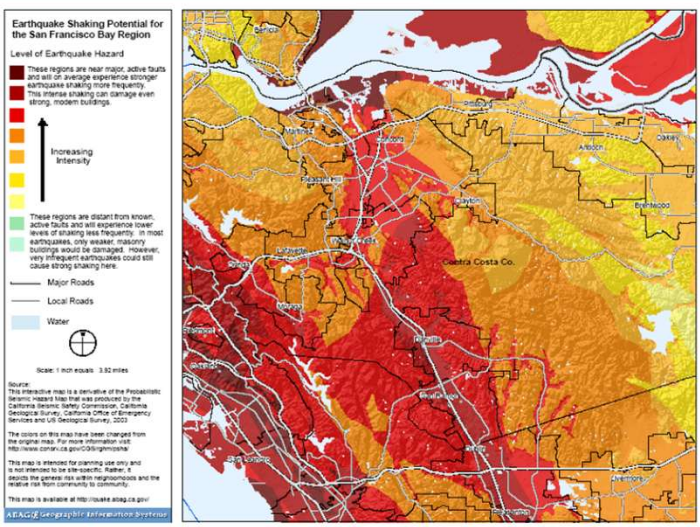


One day, the Hayward Fault could produce the greatest natural disaster ever to hit the United States

Earth Magazine, June 2016

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Earthquake Shaking Potential



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Earthquake Aftershocks

How Many Aftershocks ?

- USGS - Rule of Thumb
  - For every single decrease in magnitude, get 10 fold increase in number
- If original quake is M 7
  - 1 or so aftershock in range of M 6
  - 10 " " " " 5
  - 100 " " " " 4
  - 1000 " " " " 3

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Damage caused by Earthquakes

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





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Damage Related to Structure Type

- You may not have the opportunity to select the type of structure you are in 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 multi-unit dwellings

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Hazards from Home Fixtures

- Gas line ruptures from displaced water heaters or ranges
- Damage from falling books, dishes, and other cabinet contents
- Electrical shock from displaced appliances
- Fire from faulty wiring, overloaded plugs, or frayed electrical cords



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Preparing for *any* 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
- Have the skills to evaluate the situation quickly and take effective action to protect yourself



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Preparing for *any* Disaster

- Have a family disaster plan and practice the plan with drills
- Assemble supplies in multiple locations
- Reduce the impact of hazards through mitigation practices
- Get involved by participating in training and volunteer programs



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Family Disaster Plan

- Where will you meet family members?
- Who is your out-of-state "check-in" contact?
- Will you have a Shelter-in-Place? Extended-Stay? Evacuation?
- How will you escape your home? Workplace? School? Place of worship?
- What route (and several alternatives) will you use to evacuate your neighborhood?
- Do you have transportation?
- Did you practice your plan?

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Escape Planning

- Consider needs of children, individuals with access and functional needs, and pets
- Inform all family members or office co-workers of the plan
- Run practice escape drills
- Remember – The longer you wait to leave, the fewer options you have

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Preparing for an Emergency

CERT Members should prepare and help their community to prepare:

- Sign up for community warning systems (CWS, Nixle, etc.)
- Identify potential hazards in their homes, neighborhoods, and workplaces
- Reduce hazards where possible
- Develop disaster plans
- Develop disaster supply kits and go-bags that include pandemic safety protections

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CWS – Community Warning System

Fire determines risk



CWS distributes order





Police order evacuation

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CWS – Community Warning System

Increase Your Chances of Being Notified in an Emergency

The Contra Costa County Sheriff's Office of Emergency Services maintains our **Community Warning System (CWS)**. CWS is generally not used for non-life-threatening incidents. The CWS can call every AT&T landline in the county in just a few seconds. It can also call VoIP phones (Voice over Internet, such as Comcast, Vonage, Magic Jack, or others that rely on the internet) and cell phones that are registered with the system. If you have a cell or VoIP phone, *you must register with the Community Warning System* for them to be able to alert you. Your information will be kept confidential and will not be used for any other purposes. To register Cell phones, VoIP phones or to subscribe to text messages and emails go to: http://cwsalerts.com/.

Your information will be kept confidential and will not be used for any other purposes.

CWS phone number: 925-655-0195 – add to contacts and set Emergency Bypass

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Bay Area CWS Notifications

Local Primary Radio Stations

KCBS AM 740 KQED FM 88.5
KSJO FM 92.3 KZST FM 100.1

All FM radio stations, and all TV stations are required to carry every alert. Many AM stations carry them also

Sign up for:

Cell Phone Alerts @ http://www.cwsalerts.com

Nixle Alerts @ http://www.nixle.com or text your ZIP code to 888777

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Smart Phone Apps

FEMA App

Know what to do before, during and after a disaster

PulsePoint App

App users who have indicated they are trained in cardiopulmonary resuscitation (CPR) and willing to assist in case of an emergency can be notified if someone nearby is having a cardiac emergency and may require CPR.

Red Cross Emergency Apps

https://www.redcross.org/get-help/how-to-prepare-for-emergencies/mobile-apps.html

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Exercise

- Take the scenario given by your instructor and decide what things to bring with you and/or what to do in the time available

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Mitigation

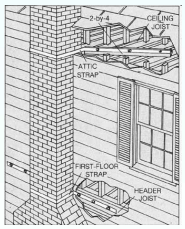
- Mitigation is lessening the impact of disasters resulting in a reduction of loss of life and damage to property or the environment and includes any activity that prevents an emergency or reduces effects of hazards
- CERT members should have adequate homeowner's insurance coverage
  - Add earthquake insurance if applicable
  - Add flood insurance if applicable

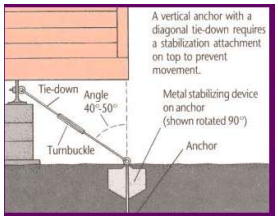
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Structural Hazard Mitigation

- Bolt older houses to their foundations
- Strap propane tanks and chimneys
- Raise utilities above flood risk level
- Strap mobile homes to their slabs
- Ask a professional to check foundation, roof connectors, chimney, etc.
- Build or designate a "safe room"







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Non-Structural Hazard Mitigation

- Home fires:
  - Burglar bars and locks on outside window entries that are easy to open from inside
- Landslides:
  - Flexible fittings that are breakage resistant
- Wildfires:
  - Reduce exterior fuel sources
    - Avoid wooden shakes and shingles
    - Clear flammable vegetation up to 30 feet from home and remove climbing vines from walls of home

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Hazard Specific Mitigation - Earthquake

- Anchor heavy furniture
- Secure appliances and office equipment
- Secure cabinet doors with childproof fasteners
- Locate and label gas, electricity and water shutoffs
- Secure water heaters
- Have flexible gas lines installed



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Hazard Specific Mitigation - Earthquake

- Store heavy and breakable objects on low shelves
- Secure bookshelves
- Move beds away from windows
- Move or secure hanging objects over beds, sofas, and chairs
- Keep shoes and a flashlight in a bag tied to a bed leg





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Earthquake Preparedness

- Develop a home earthquake plan
- Conduct earthquake drills
- Keep vehicle gas tank at least half full
- Develop a plan for reuniting family members
- Identify an out-of-state contact
- Keep supplies on hand



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During an Earthquake

- Duck, cover and hold
- If indoors, **STAY THERE**!
- If outdoors, find a spot away from buildings, trees, streetlights, powerlines, and overpasses
- If in a vehicle, drive to a clear spot and stop



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After an Earthquake

- Extinguish small fires
- Clean up spills
- Inspect home for damage
- Help neighbors
- Listen to Community Warning System (CWS) notifications or visit their website: http://cwsalerts.com
- Expect aftershocks

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Hazard Specific Mitigation - Pandemic

- Hazards:
  - Results in infrastructure disruption - supply chain, healthcare, medical supplies, schools, employment, etc.
  - Restricts evacuation and sheltering options if concurrent with a second disaster
- Mitigation:
  - Prevention is critical – vaccination, masks, hand washing, social distancing, keep hands away from face, and sanitize high-touch surfaces frequently
- Preparation:
  - 14 day supply of food, water, medications, sanitation, and shelter provisions
  - Plan for alternate sheltering and medical care

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Protective Actions During and After Any Event

- Assess situation
- Decide to stay or change locations
  - This is a critical early decision in disasters
- Seek clean air and protect your eyes, ears, nose and mouth
- Protect from debris and signal if trapped
- Remove contaminants
- Practice good hygiene

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Sheltering

- **Shelter-in-Place**
  - Identify internal room that can be sealed
  - Stay for several hours
  - Store emergency supplies
- **Shelter for extended stay**
  - Stay for several days or up to several weeks
  - Store extra supplies
- **Mass care or community shelter**
  - Take 3-day disaster kits (go-bags)
  - Shelters provide most supplies

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Emergency Supplies

CAR KITS



HOME KITS



PET KITS



OFFICE / WORKPLACE KITS



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Disaster Supply Kit

- After a disaster strikes, you will not have time to shop or search for supplies
- If you gather supplies in advance, you and your family will be better equipped for an evacuation or home confinement
- Many of the items needed for your kits are already in your household
  - These items can be assembled in appropriate locations for quick access in an emergency but are used and replaced under normal circumstances whenever needed

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Food and Water

Choose foods that:

- You like
- Require little or no cooking or water for prep
- Require no refrigeration
- Do not increase thirst (e.g., low salt)
- Meet the needs of infants, diabetics or others with special needs

Remember food for your pets, utensils and a manual can opener!

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Food and Water

- Inspect your food cache every 3 months
- Use a marking pen to write your food's expiration date
- Store food in airtight or tightly sealed plastic or metal containers
- Store in a cool, dark, dry place
- Have a way to cook your food



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Food and Water

- A person can survive weeks without food but only a few days without water

Survival Rule of 3's

3 MINUTES without AIR
3 HOURS without SHELTER
3 DAYS without WATER
3 WEEKS without FOOD



I'm having a small water crisis here!

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Food and Water

- The San Francisco Bay Area has more ground movement along tectonic plates than any other urban area in the United States
- "EBMUD's seismic work will restore partial water service within 30 days following a large earthquake… Some customers may be without water service at their residence for weeks or months."
- To be prepared, you need at least 1 gallon of potable water and 1 gallon of sanitation water per person per day, that is 14 gallons per person per week

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Food and Water

- To store water, use food grade plastic containers, do not use recycled milk containers
- Water stored in FDA approved blue drums with bleach has no expiration date
- Replace other stored water every six months
- Store water in cool and dark place
- Use a marking pen to mark expiration date
- Water trucks will be available in downtown within a few days. You will stand in line for your daily ration
- Be prepared to disinfect additional water

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Food and Water

- Lamorinda CERT Foundation offers low-cost water drums and accessories. The drums are plastic FDA approved drinking water vessels
  - 5 gallon Stacker Drums
  - 55 gallon Drums
  - Wrenches
  - Pumps
  - Other accessories
- Sales are ongoing for delivery in East Bay
- Purchase online at http://supplies.lamorindacert.org

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Human Waste

- The third part of the human needs trilogy is WASTE COLLECTION and DISPOSAL
- When an earthquake breaks water lines, it can also break sewer lines.
- Without water, toilets cannot flush.
- Several solutions can be utilized for days, weeks, or months. One is a twin-bucket system. Another is using a home septic system, if you have one. A third system is to use liner bags in your toilet.

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Human Waste

- The twin-bucket system separates fecal matter from urine.



- Urine poses almost no health risk and can be sprinkled onto land. It is about 10 times the volume of fecal matter.
- Fecal matter contains most of the pathogens and needs to be treated. Each person only produces 4-10 ounces daily.

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Human Waste

- The toilet liner system utilizes a disposable bag with a pad that absorbs and gels the urine.



- Both systems require the bagged waste to be stored until local refuse collection is able to deploy trucks for pickup.
- Special needs persons can be those who are undergoing radiation, chemotherapy, or have infectious diseases. These need to have their own system precautions.



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Go Bags

- A Go-Bag is an always-ready bag that has everything you would need for a few days
- We will discuss Go-Bags, Office/Workplace Bags, Car Bags, Search Bags, etc. throughout the CERT Basic Training Series
- Go-bag suggested contents (and much more) can be found on page 5 of:

  https://lamorindacert.org/evacuate/documents/Residents_Guide.pdf



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Where do we get supplies?

- Hardware stores
- Grocery stores
- Camping stores
- Emergency Preparedness stores
- Online
- CERT policy is that we do not endorse or recommend any vendors or brands



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Homework Assignment

- Discuss preparedness with family and friends and create a communications plan, including the *cell number* of an out-of-state "check-in contact" using **text messages only**!
- Begin to assemble supplies in multiple locations, home, work, car, etc.
- Examine your home for hazards and identify ways to prevent potential injury
- Get every cell phone and VoIP phone in your household signed up for CWS

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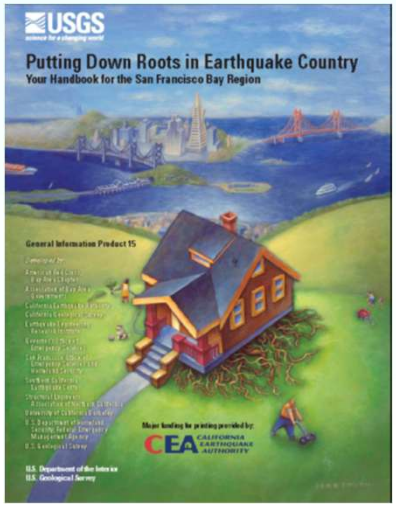
Questions ?



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Additional Resource



- Guide to preparing your family and home
- Tailored to the Bay Area
- No longer in print
- Available in multiple languages at

https://earthquake.usgs.gov/contactus/menlo/prepare/

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Takeaways

- CERT Roles
- The types of disasters we face and preparing for them
- Identifying home and workplace hazards and reducing those hazards
- Preparedness actions
  - Family Emergency Plan
  - Practicing the Plan
  - Water and Food
  - Go-Bags

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