



CERT Basic Training

Unit 1: Disaster Preparedness



FEMA

Setting the Stage



- CERTs are able to:
 - Assist emergency services personnel when requested in accordance with standard operating procedures (SOPs) developed by the sponsoring agency and by area of training
 - Assume some of the same functions as emergency services personnel following a disaster
 - Prepare families and communities prior to emergencies and assist neighbors during an emergency when first responders are not immediately available



Course Preview



- Unit 1: Disaster Preparedness
- Unit 2: CERT Organization
- Unit 3: Disaster Medical Operations, Part 1
- Unit 4: Disaster Medical Operations, Part 2
- Unit 5: Disaster Psychology
- Unit 6: Fire Safety and Utility Controls
- Unit 7: Light Search and Rescue Operations
- Unit 8: Terrorism and CERT



Unit Objectives



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



Exercise 1.1



- Work in groups of five to design and construct a free-standing tower that stands at least 5 feet tall from the bottom of the structure to the top
- You will have a total of 10 minutes. Spend the first 5 minutes planning and designing the tower as a group. While you are planning, you should not touch any of the materials
- Wait to be told when to begin construction and you will have 5 minutes from that point to complete the tower



PM 1-2



Examples of Disasters



What are some significant disasters that have occurred around the globe?



Examples of Disasters



- Myanmar – Earthquake (March 2025)
 - 7.7 magnitude
 - 5,400+ fatalities
 - 11,400+ injuries
 - ~\$11+ billion USD in damage



Examples of Disasters



- Los Angeles – Wildfires (January 2025)
 - 57,000+ acres of land burned
 - 30+ fatalities
 - 200,000+ people evacuated
 - 18,000+ structures destroyed
 - ~\$250+ billion USD in damage



Examples of Disasters



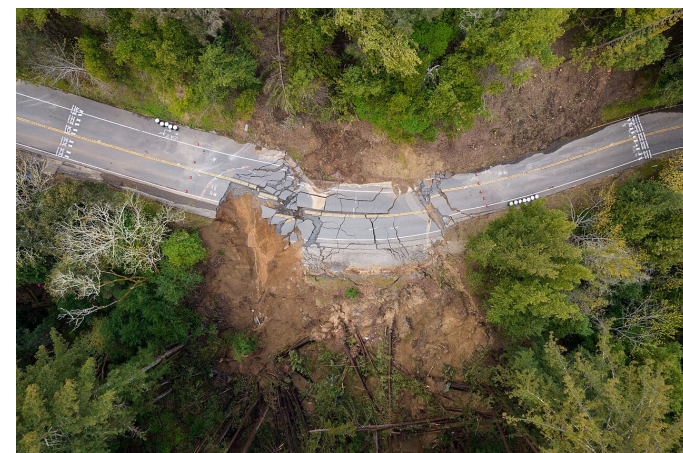
- Turkey & Syria – Earthquake (February 2023)
 - Twin earthquakes of 7.8 and 7.7 magnitude
 - 60,000+ fatalities
 - 120,000+ injuries
 - ~\$157+ billion USD in damage



Examples of Disasters



- California – Winter Storms (December 2022)
 - Heavy rainfall caused by multiple atmospheric rivers
 - 200,000+ homes and businesses without power
 - 6,000+ people evacuated
 - 22+ fatalities
 - ~\$4.6+ billion USD in damage



Examples of Disasters



Examples of Disasters



- Indian Ocean Earthquake & Tsunami (December 2004)
 - 9.2-9.3 magnitude earthquake
 - Tsunami with ~100ft. high waves
 - 227,000+ fatalities
 - 1.7+ million people displaced
 - ~\$13+ billion USD in damage



Examples of Disasters



Examples of Disasters



- Loma Prieta Earthquake (October 1989)
 - 6.9 magnitude
 - 63 fatalities
 - 3,700+ injured
 - 12,000+ people displaced
 - \$6+ billion USD in damages



Examples of Disasters



Examples of Disasters



DISPATCHER: THE LIGHTS ARE OUT? OKAY.
THAT'S...THAT'S GOING TO BE A PROBLEM, UM, THE
FIRE DEPARTMENT... I CAN'T CONNECT YOU, BECAUSE
THEY'RE...THEY'RE BACKED UP, I MEAN THEY HAVE SO
MANY C U F S W W D A K T W
T D U

Examples of Disasters



- Boston Marathon Bombing (April 2013)
 - Pressure cooker bombs detonated near the finish line
 - 3 fatalities
 - 16 traumatic amputations
 - 269 injured



Examples of Disasters



- 9/11 Terrorist Attacks (September 2001)
 - Four coordinated suicide attacks; hijacking of commercial airliners
 - 2,996 fatalities
 - 6,000-25,000+ injured
 - ~\$83 billion USD in damages
 - *Likely higher due to economic impact*



Community Preparedness Roles



- Preparedness is important for communities of all sizes across the Nation
 - Key priority in lessening the impact of disasters
 - Critical that all community members take steps to prepare
 - Effective when addresses unique attributes of community and engages whole community



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



Emergency Operations Plan (EOP)



- All government agencies with a role in disaster response work to organize and coordinate their agencies' activities before an emergency or disaster using EOP's:
 - 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



Community Leaders



- Have a responsibility to participate in community preparedness:
 - Participate on local collaborative planning council
 - Identify and integrate appropriate resources into government plans
 - Ensure facilities, staff, and customers served are prepared



The Public



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



Engaging the Whole Community



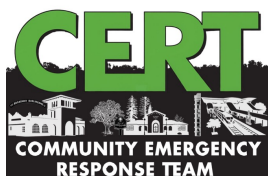
- Whole Community approach to emergency preparedness seeks to engage the full capacity of society
- Relationships and social connections are the foundation for a more resilient community that can bounce back after a disaster
- Community coalitions strengthen relationships and provide a framework for organizing community preparedness efforts



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 keeps skills current
 - CERT program provides training, practice, and connection to others
 - Participate in drills and exercises
 - Talk to friends and family about volunteering



Type of Disasters



- **Natural** (e.g., earthquakes, wildfires, floods, extreme heat, hurricanes, landslides, thunderstorms, tornadoes, tsunamis, volcanic eruptions, winter storms)
- **Technological & Accidental** (e.g., hazardous material spill, nuclear power plant accident)
- **Terrorism** (e.g., chemical, biological, radiological, nuclear, explosive weapons)



Key Disaster Elements



- They are relatively unexpected
- Emergency personnel may be overwhelmed
- Lives, health, and the environment are endangered



Local Hazard Vulnerability



- Identify most common disasters that occur
- Identify possible hazards with most severe impact
- Consider recent or historical impacts
- Identify susceptible locations in the community for specific hazards
- Consider what to expect from disruption of services



Infrastructure Damage



- Resources will be applied to the highest priority need:
 - Police will address incidences of grave public safety
 - Firefighters will suppress major fires
 - EMS personnel will handle life-threatening injuries



Damage 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



Home Hazards



- Gas line ruptures from water heaters or ranges displaced by shaking, water, or wind
- Damage from falling books, dishes, or other cabinet contents
- Risk of injury or electric shock from displaced appliances and office equipment
- Fire from faulty wiring, overloaded plugs, frayed electrical cords



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



Preparing for a Disaster



SMC Alert

San Mateo County Alert System



genasys Protect

FORMERLY ZONEHAVEN **AWARE**



MyShake™



Preparing for a Disaster



- Have the skills to evaluate the situation quickly and take effective action to protect yourself
- 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



Family 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?



Important Phone Numbers



Burlingame

Police (Emergency): 911 or 650-692-0310

Police (Non-Emergency): 650-777-4100

Fire (Dispatch): 911 or 650-368-1421

Fire (Administration): 650-558-7600

Public Works (Main Line): 650-558-7670 or 650-558-7230

Public Works (After-Hours – Police): 650-692-0604



Important Phone Numbers



Hillsborough

Police (Emergency): 911 or 650-375-7470

Police (Non-Emergency): 650-375-7470

Fire (Dispatch): 911 or 650-368-1421

Fire (Administration): 650-558-7600

Public Works (Main Line): 650-375-7444

Public Works (After-Hours – Police): 650-375-7470



Important Phone Numbers



Millbrae

Sheriff's Office (Emergency): 911 or 650-697-1212

Sheriff's Office (Non-Emergency): 650-259-2300

Fire (Dispatch): 911 or 650-368-1421

Fire (Administration): 650-558-7600

Public Works (Main Line): 650-259-2339

Public Works (After-Hours – PSC): 650-363-4951



Important Phone Numbers



San Bruno

Police (Emergency): 911 or 650-877-8989

Police (Non-Emergency): 650-616-7100

Fire (Dispatch): 911 or 650-368-1421

Fire (Administration): 650-616-7096

Public Works (Main Line): 650-616-7065

Public Works (After-Hours – Police): 650-616-7100



Important Phone Numbers



Miscellaneous

Poison Control: 800-222-1222

Pacific Gas & Electric (PG&E): 800-743-5000

Life safety issues: Call 9-1-1, then PG&E.

Peninsula Human Society & SPCA

Animal Rescue & Control Dispatch: 650-340-8200

After-Hours – PSC: 650-363-4953



Disaster Supply Kit



- After 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 used under normal circumstances whenever needed



Disaster Supply Kit



☒ WATER

Save up to 3 gallons per person, for drinking and washing.



Be sure that you've got 3 days worth of water (1 gallon per person/per day)

☒ FOOD

Set aside foods that won't spoil and require no cooking

You know best what you and your family like to eat.



☒ TRASH BAGS

Set aside extra plastic bags, with ties, to use in a bucket for a toilet.



Go Bag



TO PACK NOW

☒ DOCUMENTS

Copies of identification and insurance.

Deeds, titles, and other papers important to you

Photos of family and pets.



☒ CASH

Small bills \$1s & \$5s.

Save up a little at a time.



☒ MAP

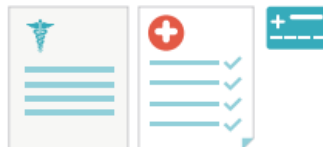
Mark different routes out of your neighborhood on a paper map.



☒ MEDICATIONS LIST

List all prescriptions.

Other important medical information.



PACK AS YOU LEAVE



☒ Wallet or purse and keys

☒ Phone and charger

☒ Medicine

☒ Mask



GRAB IF YOU HAVE



☒ Portable radio

☒ Flashlight

☒ First aid supplies

☒ Portable computer



Escape Planning



- Consider needs of children and individuals with access and functional needs
- Inform all family members or office coworkers of the plan
- Run practice escape drills



Exercise 1.2



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



Protective Actions



- Assess situation
- Decide to stay or change locations
 - This is a 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



Mitigation



- Mitigation is the reduction of loss of life and property by lessening the impact of disasters and includes 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



Structural 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



Non-Structural Hazard Mitigation



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



Fortifying Your Home



- Non-structural hazard mitigation by disaster type:
 - Home fires: Burglar bars and locks on outside window entries easy to open from the inside
 - Landslides: Flexible fittings are more breakage resistant
 - Wildfires: Reduce fuel sources
 - Avoid wooden shakes and shingles
 - Clear flammable vegetation up to 30 feet from home and remove climbing vines from walls of home

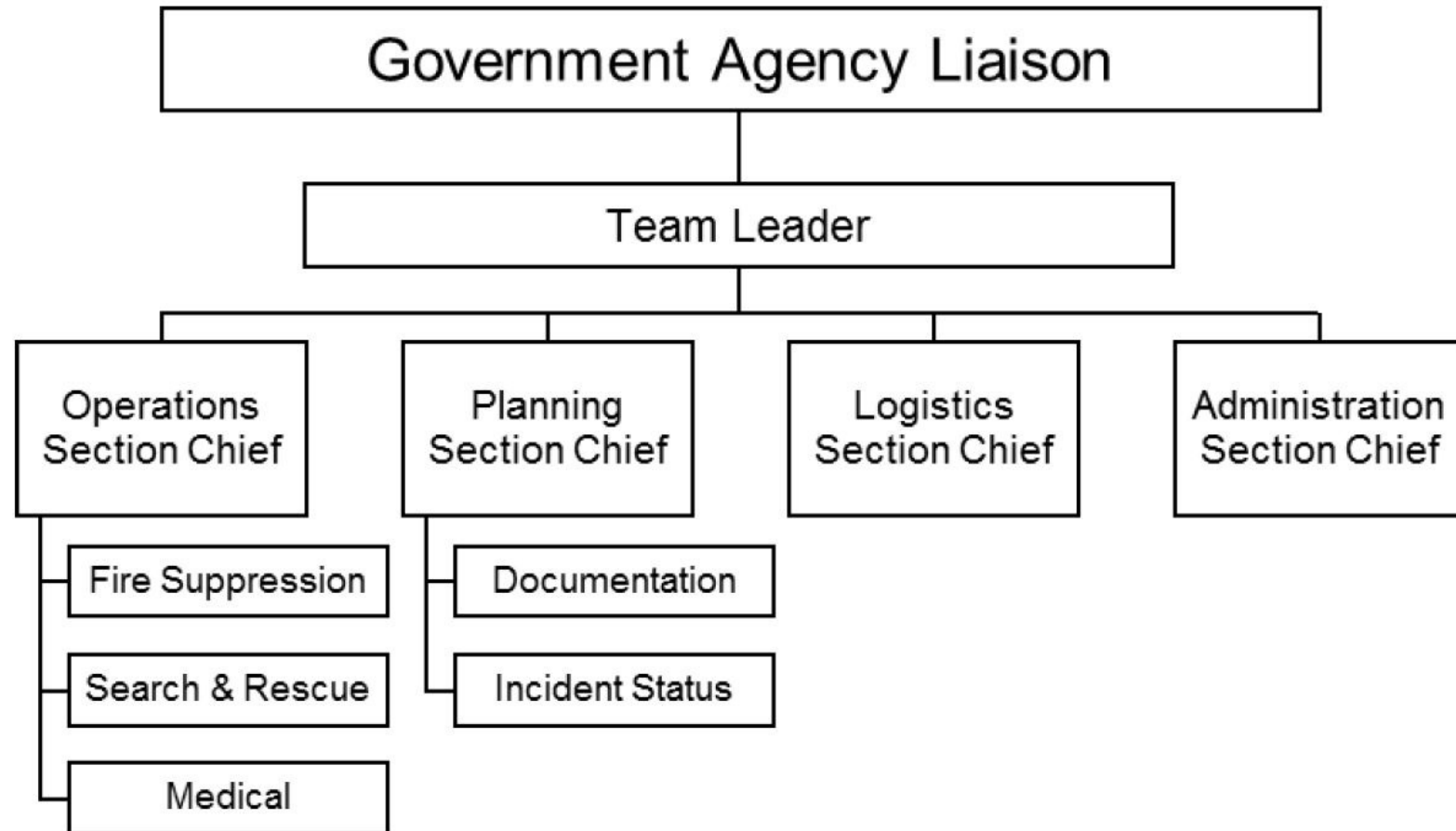
CERT Disaster Response



- 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, if safe to do so
 - Extinguishing small fires
 - Conducting light search and rescue operations



CERT Organization



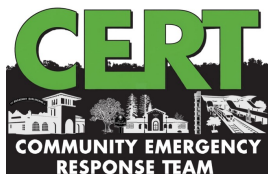
Personal Protective Equipment



- Helmet
- Goggles
- N95 Mask
- Gloves (work and non-latex)
- Sturdy shoes or work boots



CERT in Action



CERT Basic Training Unit 1: Disaster Preparedness

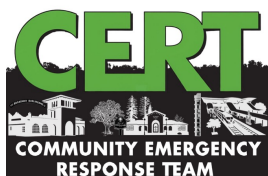
PM 1-24



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
- Participate in parade route management



PM 1-24



Protection for Disaster Workers



- CERT members are generally protected by:
 - “Good Samaritan” laws
 - Volunteer Protection Act of 1997
 - Relevant State statutes



Additional Training



- 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
- Volunteer management
- Online courses (IS)



Unit Summary



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



Homework Assignment



- Review the detailed information in Unit 1 of the Participant Manual
- Read and familiarize yourself with Unit 2: CERT Organization in the Participant Manual
- Discuss preparedness with family and friends and make a communications plan, including an out-of-state “check-in contact ”
- Begin to assemble supplies in multiple locations
- Examine your home for hazards and identify ways to prevent potential injury

