Disaster Preparedness

Why take CERT?

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citizen corps

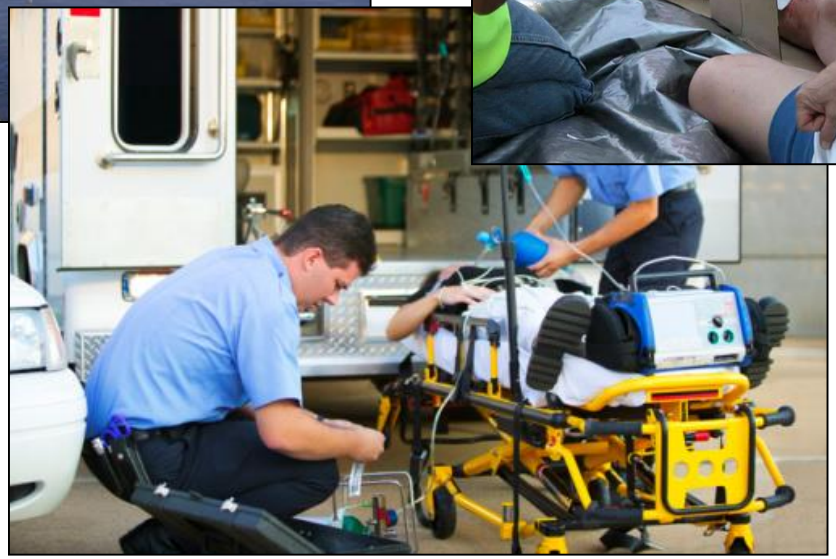
David Malin, CEM

- **Emergency Manager for the Port of LA**
  - Los Angeles Port Police
  - ITA Communications Tech for LAPD, LAFD
- **Military**
  - 6 Years Marines (Sgt)
  - 13 Years Air National Guard (MSgt)
  - 7 Years Air Force Reserve (Capt)
  - 5 Years NARS – Retired with 31 years of service
- **Ham Radio**
  - Licensed in 87 at Keesler AFB, Biloxi, MS – N5LFS
  - 89 upgraded to Extra – AA6RV

CRAP HAPPENS

- Blackout of New York in 1977 (Yonkers)
- Hurricanes too many to count
- Postal Coworker kills four of my Supervisors
- Northridge Earthquake, lost condo
- LA Civil Disturbance – Riots (Setup CP)
- Tsunami's (Japan and Chile)
- War's (Activated numerous times)
- Wildfires, Academy Awards, Olympics, Marathons, Freeway shootings, Carmageddon, Raider Games, Concerts, Rose Bowl, etc

Setting the Stage



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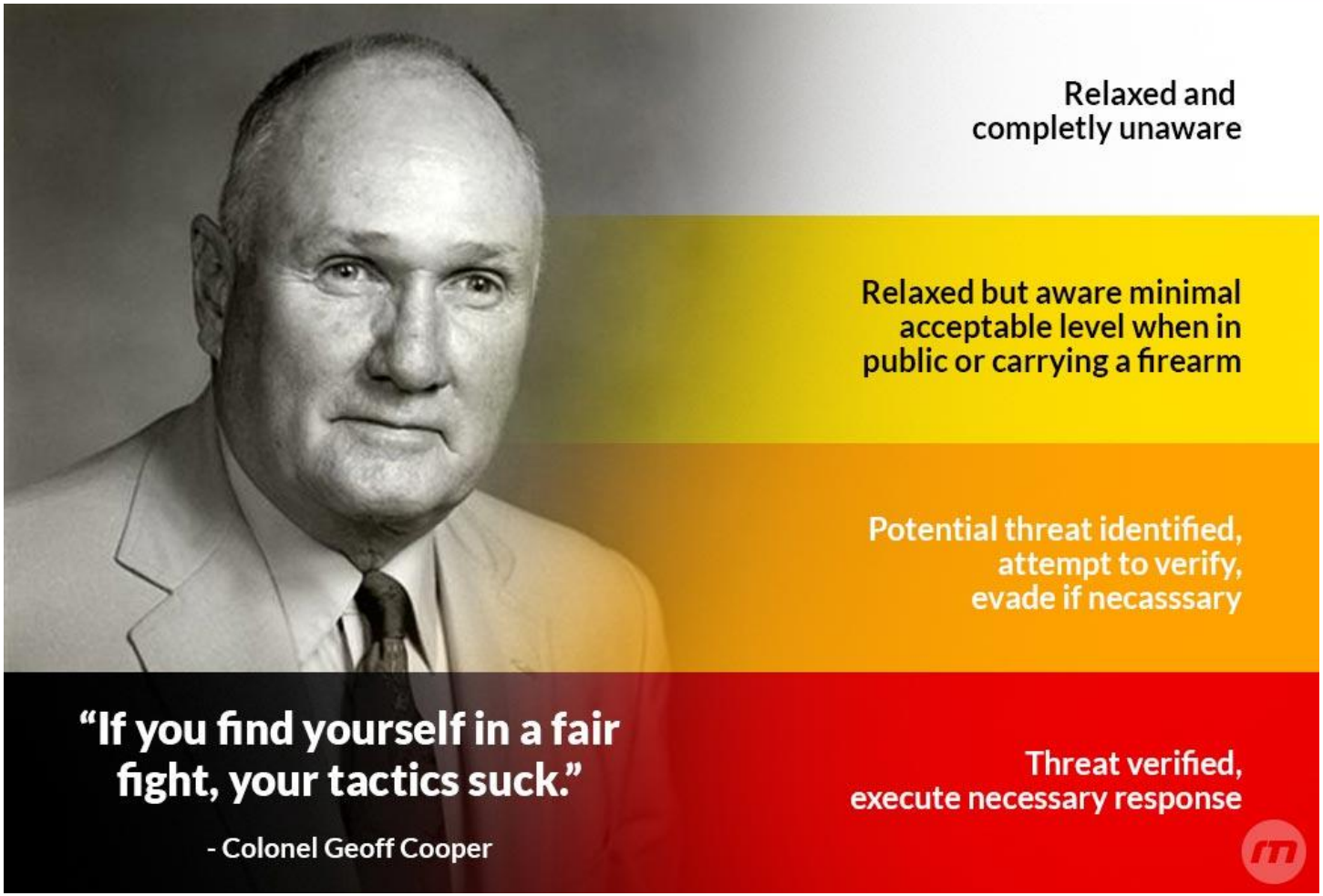
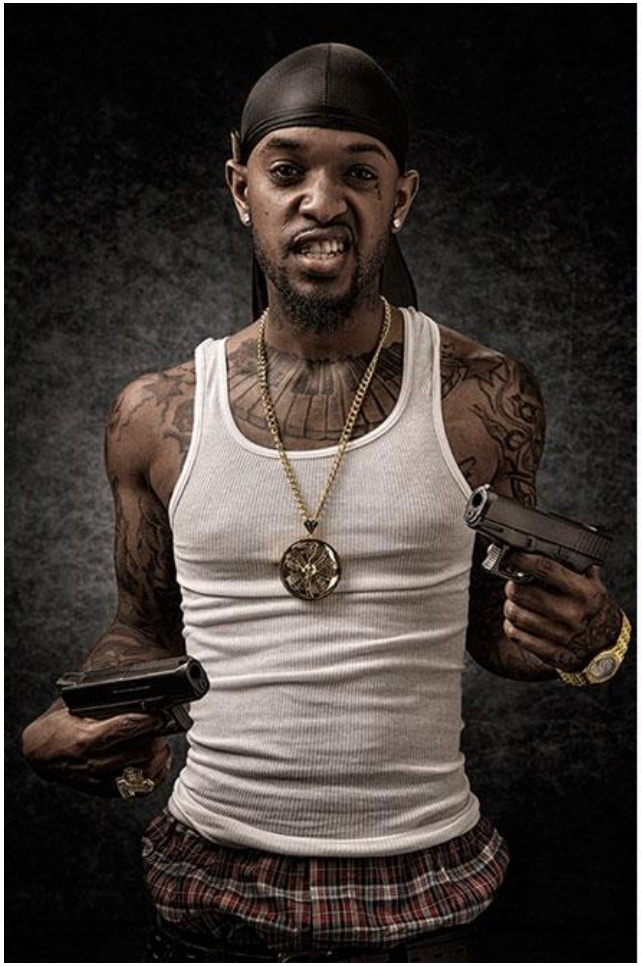
Darwin Award Winner of my Career

- Dustin Douglas Weber
- 25 y/o
- Liked Photography
- Was getting his life back to order
- He and his buddies went to the mouth of the Klamath River in Cresent City, OR
- Fort Stevens Park
- Tragic Loss because he was $%&^ STUPID.


Relaxed and
completly unaware
Relaxed but aware minimal
acceptable level when in
public or carrying a firearm
Potential threat identified,
attempt to verify,
evade if necasssary
"If you find yourself in a fair
fight, your tactics suck."
- Colonel Geoff Cooper
Threat verified,
execute necessary response



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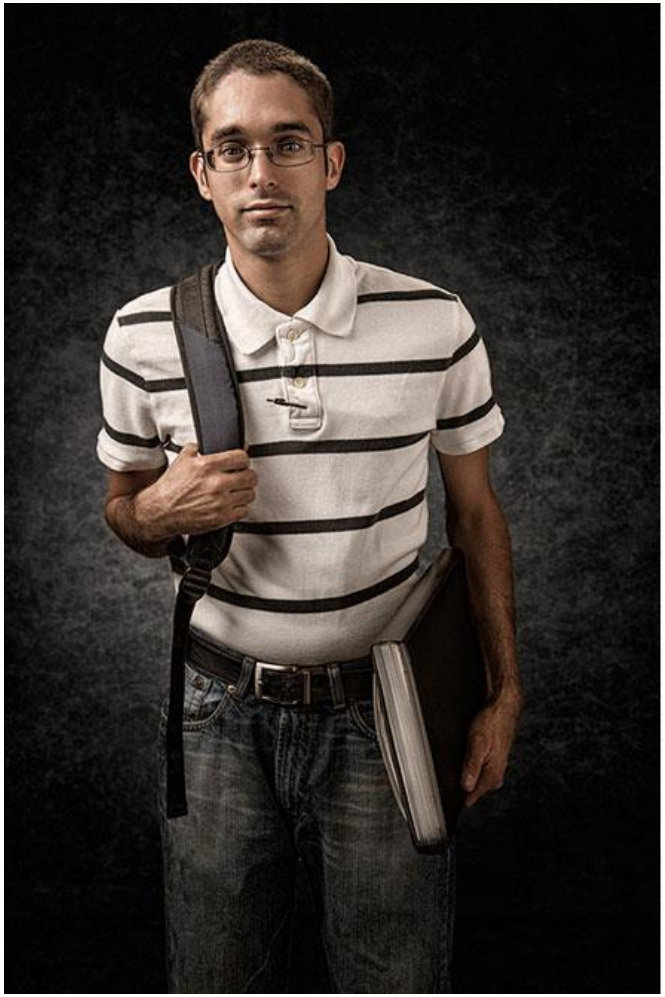
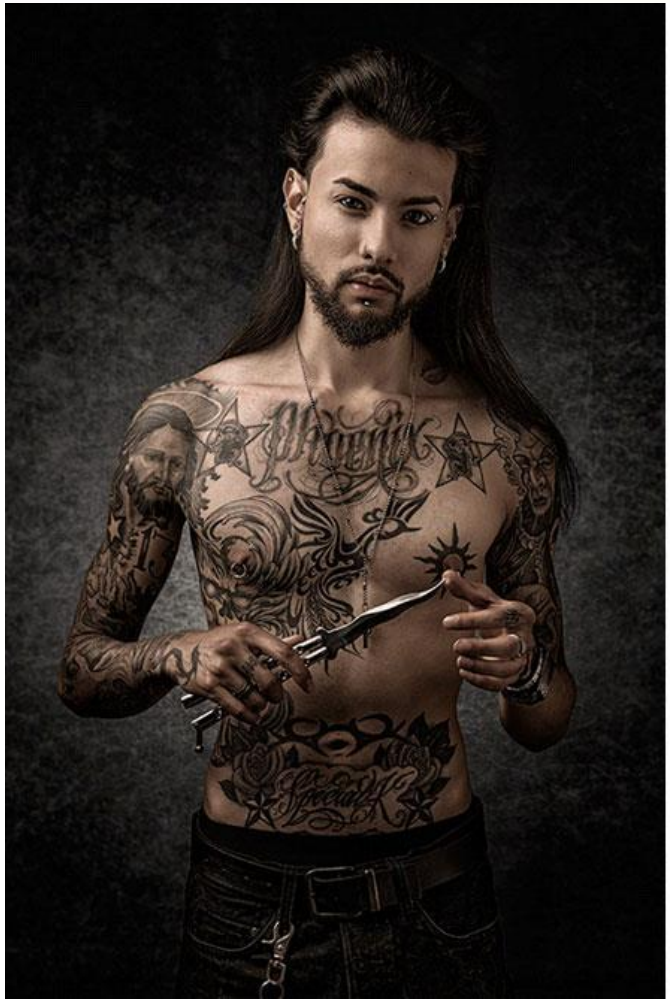



QUEER



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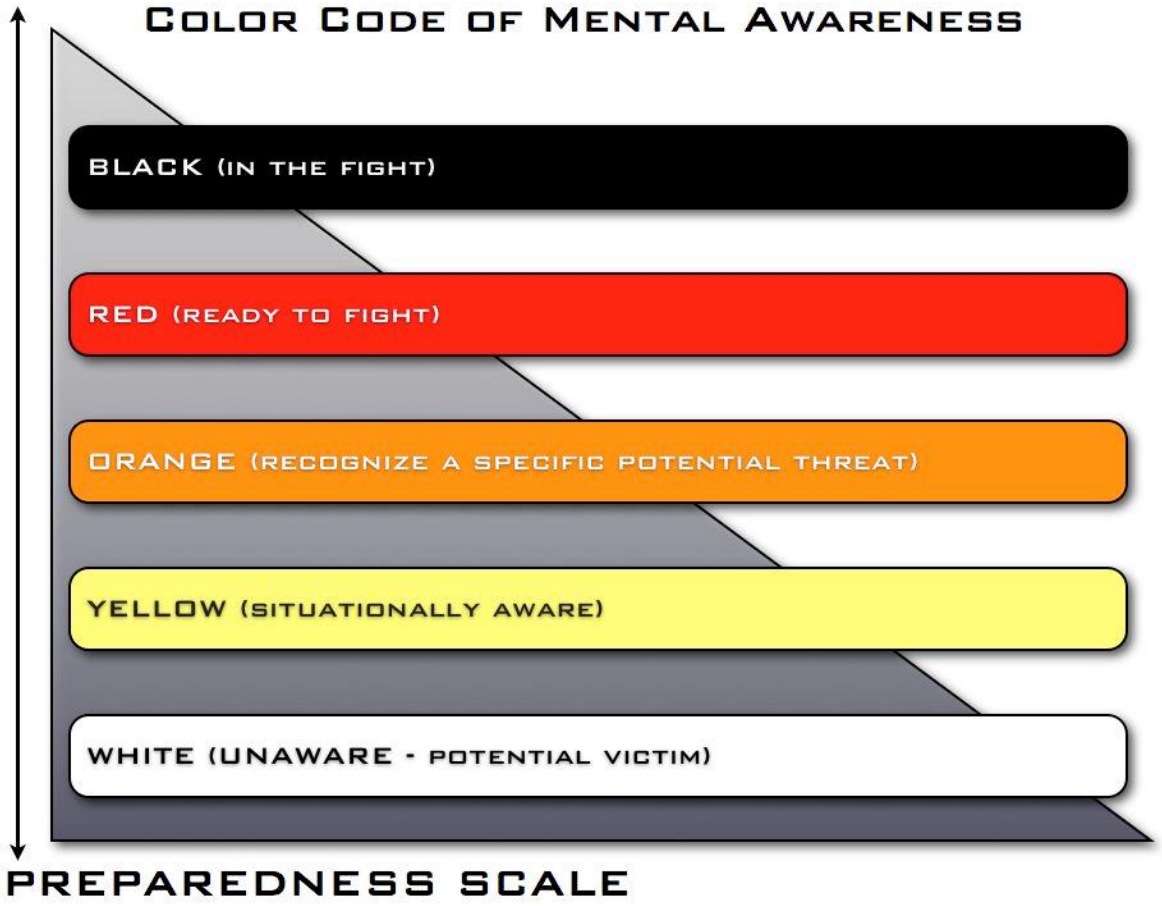
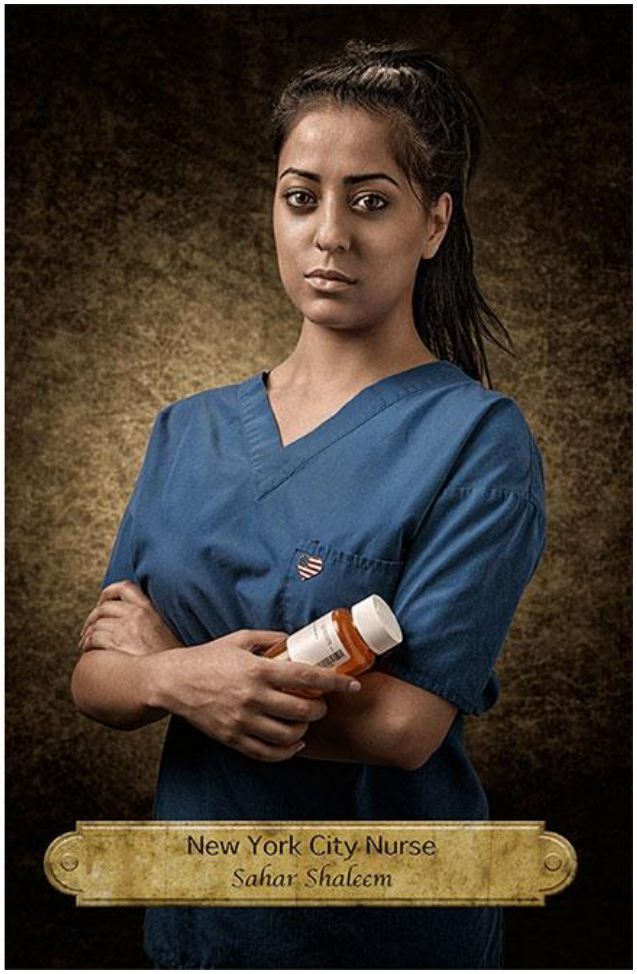

COLOR CODE OF MENTAL AWARENESS
BLACK (IN THE FIGHT)
RED (READY TO FIGHT)
ORANGE (RECOGNIZE A SPECIFIC POTENTIAL THREAT)
YELLOW (SITUATIONALLY AWARE)
WHITE (UNAWARE - POTENTIAL VICTIM)
PREPAREDNESS SCALE


Harvard Graduate
Jefferson Moon



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CEO of a Fortune 500 Company
Edgar Gonzalez

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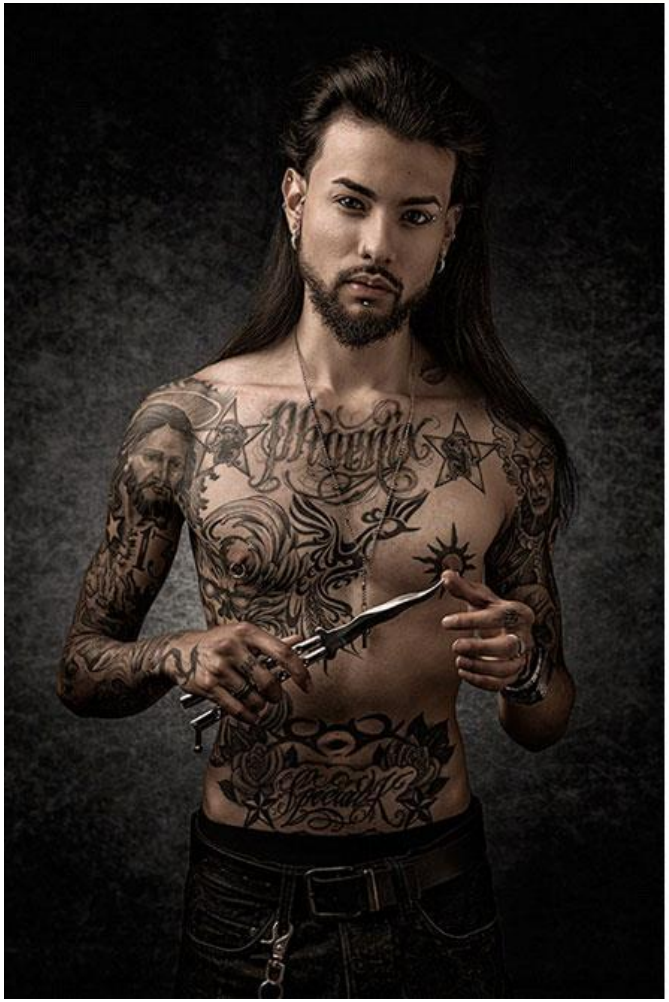

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Giving credit

Judging America: Photographer Challenges Our Prejudice By Alternating Between Judgment and Reality

Joel Parés, a U.S. Marine-turned-photographer

Course Preview

- Fire safety
- Disaster medical operations
- Light search and rescue
- CERT organization
- Disaster psychology
- CERT and terrorism

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 CERTs

Community Preparedness: Roles and Responsibilities

- 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

- 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 that 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
- Give feedback to community
- Report suspicious activity
- Volunteer

Engaging the Whole Community

- Goal of Citizen Corps is to make communities safer, more prepared, and more resilient
- Citizen Corps Councils bring government and community leaders together
- Councils ensure emergency plans more effectively reflect the community

Types of Disaster

- Natural
- Technological
- Intentional

Key Disaster Elements

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

“Disaster ” versus “Catastrophe”

Disasters Are Short Term

“Make Do For 3-4 Days Until Help Arrives…”

Catastrophic Events Are Long Term

- **Katrina-scale Hurricane, Tsunami, Earthquake**
- **Major Terror Attack, Nuclear Detonation, Dirty Bomb**
- **No Help Is Coming Soon, “You Are On Your Own”**

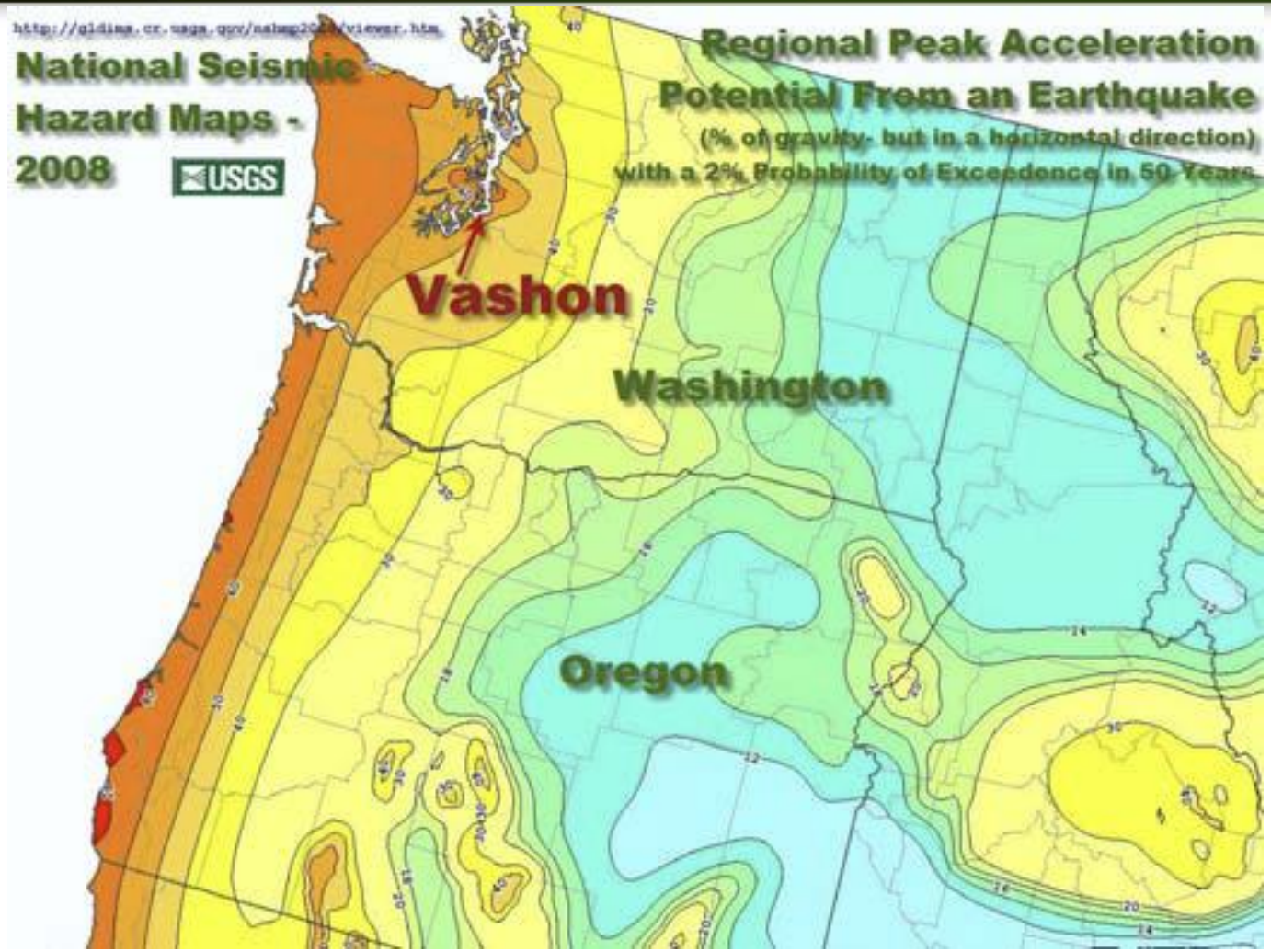
Why?

- **Complete Loss Of Civil Infrastructure**
- **Minimal Or No Police, Fire Or EMS Response**
- **No Electricity, Municipal Water, Communications**
- **Transport Of Fuel / Food Is Severely Impaired**
- **Public Safety Agencies Will Be Overwhelmed**
- **Recovery Is Long Term (Over 30 Days)**

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

EARTHQUAKES



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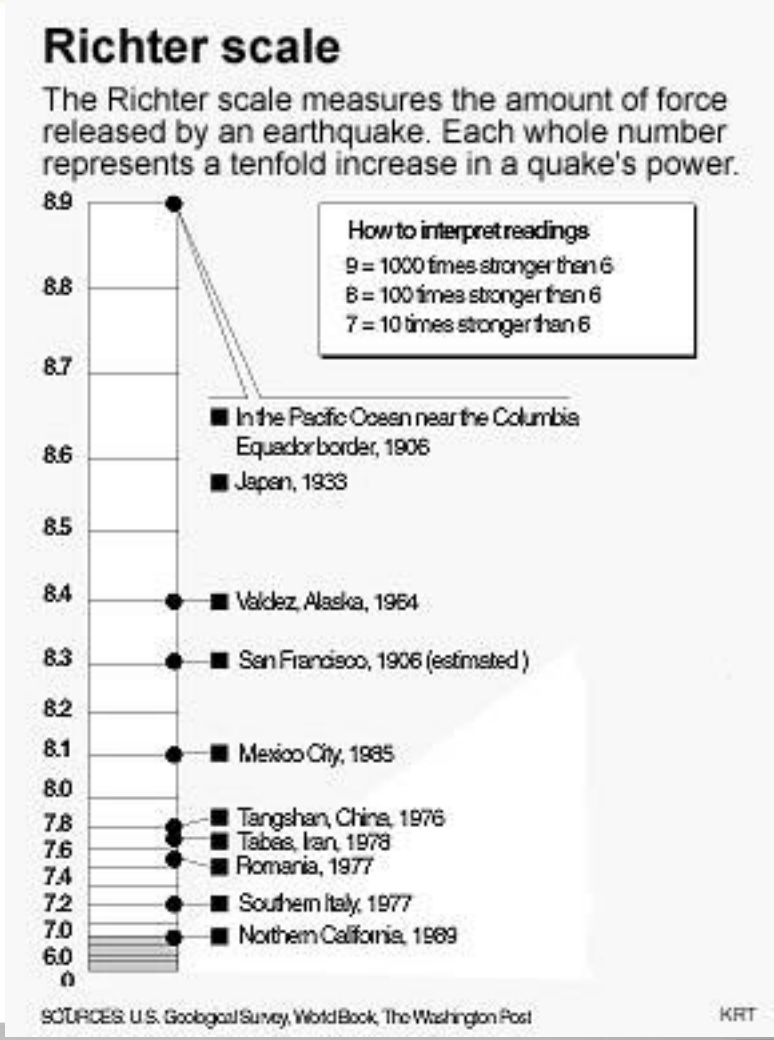
Magnitude - The Richter Scale

- SMALL
  - <5.0
- MODERATE
  - 5.0 – 5.9
- LARGE
  - 6.0 – 6.9
- MAJOR
  - 7.0 – 7.9
- GREAT
  - >8.0



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1857 - Fort Tejon - 7.8

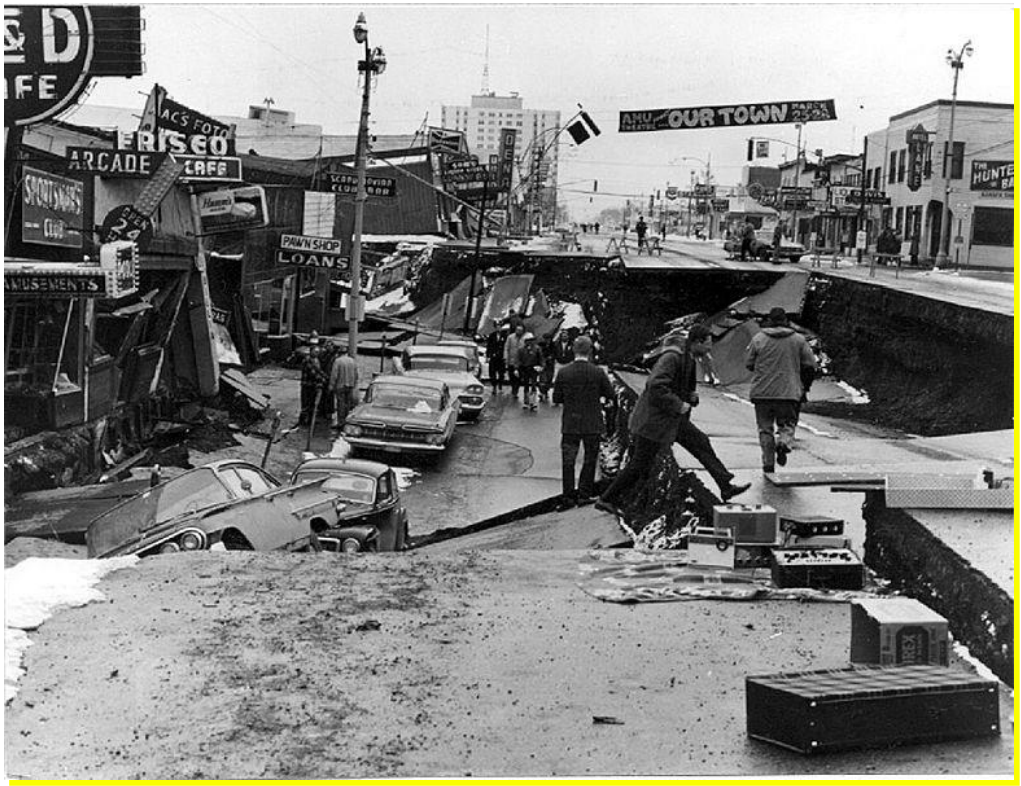
- January 9, 1857 - 8:20 Am
- Last Major Quake On The San Andreas In Southern California
  - Only 2 Deaths
    - 1 Woman Died In Her Adobe House Collapse
    - 1 Man Died From A Heart Attack
      - 60 Miles Away In L.A

1906 - San Francisco - 7.7

- April 18, 1906
  - 5:12 am
  - 3,000 Dead

1964 - Anchorage, Alaska - 9.2

- March 27, 1964
- 5:36 pm
- Deaths – 131
  - 9 From Earthquake
  - 106 From Alaska Tsunami
  - 16 From California Tsunami
- Duration
  - >4 min
- 10,000 Aftershocks
- Largest EQ ever in the U.S
  - 2nd Largest In World
  - 1st Chile 1960, 9.5



In Anchorage the ground dropped 9 feet and shifted 11 feet

1971- Sylmar - 6.7

- February 9, 1971
- 6:00 am
- 65 Dead

1971- Sylmar - 6.7

- Sepulveda VA Hospital
- Pre-1933 construction

1989 - Loma Prieta, Bay Area - 7.0

- October 17, 1989
- 5:04 pm
- 67 Dead
- Much of the damage in San Francisco could be directly related to the type of soils that structures were built on.

1994 - Northridge - 6.7

- January 17, 1994
- 4:31 am
- 72 Deaths
  - Over one-half the deaths occurred after the shaking stopped
  - Time of day limited potential death count

Northridge Epicenter

CSUN

- Major Damage to Multiple Structures
  - Parking Structures Collapse

Granada Hills

Bridge Failures during the NR Earthquake

Interstate 10 in Metro Los Angeles

Tsunami – The Unexpected Hazard

- Tsunami (Open Ocean) Waves
- 80 Tsunamis In California During The Past 150 Years.
- 9 Causing Minor Damage To Ports And Harbors.
- 2 With Major Impacts.
- 4 Caused Deaths
- Worst Caused By The Alaskan Earthquake Of 1964.
  - 16 Deaths In California
  - The Wave Caused By The Tsunami Was 210 Feet Tall.

Tsunami - Valdez, Alaska 1964

- The Tsunami in Valdez, AK snapped off these trees.
  - Caused 82 deaths in Alaska
  - 4 in Newport Beach California
  - 16 in Oregon

Impact on Infrastructure

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

Disruption of Transportation & City Services

- Inability to assess damage accurately
- Ambulances prevented from reaching victims
- Police prevented from reaching areas of civil unrest
- Fire departments prevented from getting to fires
- Interruption to the flow of needed supplies


Roads may be impassable!

Structures

- Damaged hospitals unable to function normally
- Increased risk of damage from falling debris

Communication

- Telephone services are cut and restored on a priority basis
  - Government & Emergency Lines
  - Long Distance
  - Pay Phones
  - Business & Residential
- Your phone may not be turned on for days or until call load has dropped

Cellular Telephones

- May Work
  - But Will Probably Be Overloaded
  - May Only Work If Calling Another Cell Phone On The Same Cell System

Utilities

- Loss of utilities
- Increased risk of fire or electrical shock
- Loss of contact between victims and service providers
- Inadequate water supply
- Increased risk to public health

Balboa Blvd.

- Water Main Rupture
  - One of 7 municipal trunk lines severely damaged
  - 56 inch main
- Gas Main Rupture
  - 20 inch main
    - ❖Sparked by motorist driving over fracture site
- 5 Homes Lost

Water Supplies

- Firefighting capabilities restricted
- Medical facilities hampered

Fuel Supplies

- Increased Risk Of Fire Or Explosion From Fuel Line Rupture
- Environmental Impact
- Supply Problems

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

STRUCTURAL HAZARDS

Identifying hazards associated with different construction designs and different building types

Single Family Homes

- Safest building to be in during an earthquake
  - Rarely collapse due to wood frame construction
- Masonry chimneys and glass present most serious internal home hazards
- Greatest risks for injury are from non-structural hazards
- Outdoor block/brick garden walls fail regularly
- Be aware of:
  - Patio covers, sheds

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Mobile Homes

Apartments

- Wood frame construction is safest design
- Wood vs Brick
- Foundations
- Building Codes

High-Rise

- Relatively safe
  - Designed to withstand EQ's
- Will normally flex and sway to absorb earthquake energy
  - Up to 20 feet each direction in highest buildings
- Will drop glass and façade material on ground below
  - As far away as 1-1/2 times it's height

Public Assemblies

- People panic when:
  - They feel their life threatened
  - And they don't know what to do
- They will always rush for the same door that they came in. This is where the crush will occur.
  - Look for alternate exits before you need them
  - Make a escape plan

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

Non-structural Hazards

- Secure It If It's At Or Above Desktop Level.
- Sit/Sleep Away From Windows.
  - Or Use Eq Film To Keep Windows From Shattering.
- Safety Wire Ceiling Fixtures
- Secure All Gas Appliances
  - Washer, Water Heater, Stove.
- Secure Refrigerator.
- Secure Cabinet Doors.
- Secure Pictures With Glass.
  - Or Replace With Plexiglas.
- Make Sure Bedroom Is Best Prepared Room.
  - Furniture/Headboard Secured
  - Flashlight W/Batteries
  - Shoes
  - Crowbar
  - Escape Ladder

Home and Workplace Preparedness

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

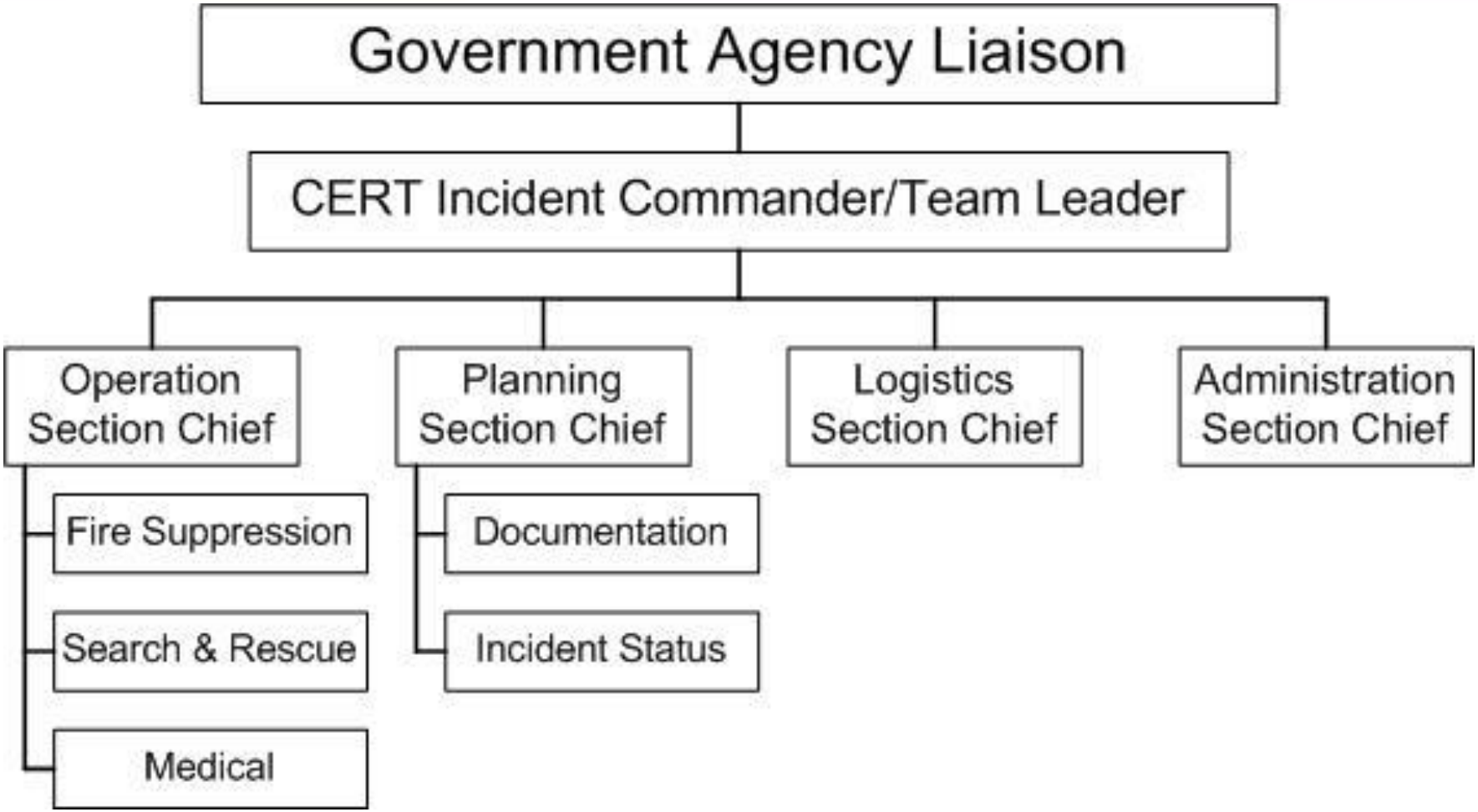
Get Involved

- 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



Personal Protective Equipment

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

CERT in Action

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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
  - 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

Summary

- Train, Train, Train
- CERT Training is 17 ½ hours
- Government can only do so much
- Look in the Mirror
- Have a PLAN
- Don’t be a sheep. BE A WOLF
- Be a prepper!
- Communications and Ham Radio, Good Start
- Don’t be a Dustin Douglas Weber