

DISASTER RESPONSE

ROADWAY SAFETY+ Awareness Program

Trainee Booklet



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A Road Construction Industry Consortium Awareness Program

Disaster Response

What Is Disaster Response?

Disaster Response is an **action plan** to deal with natural or man-made incidents.

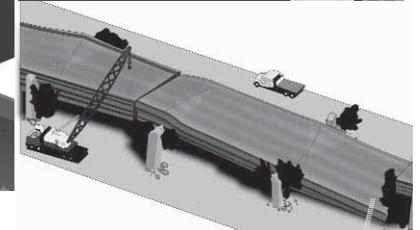
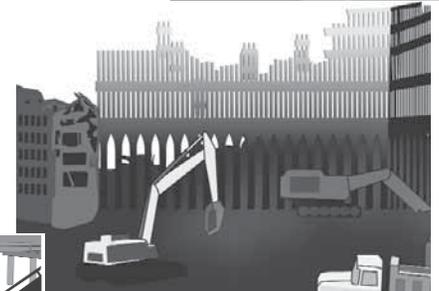
Natural disaster incidents:

- Hurricane
- Tornado
- Earthquake
- Fire
- Flood
- Epidemic/Pandemic



Disaster incidents caused by humans or human system flaws:

- Accident
- Accidental Release
- Intentional Release
- Bombs/Explosives



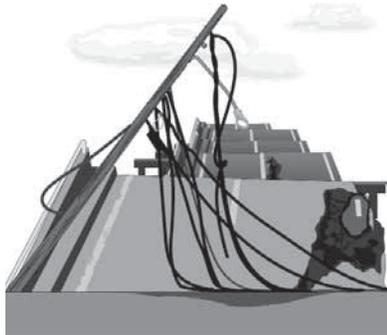
How Does Disaster Response Differ From Regular Road Work?

Disaster response for road workers means many important differences in:

- command structure,
- hazard exposures, and
- schedules.



Some possible differences between road work and disaster response are:



- New command structure.
- New hazard exposures.



- Unplanned or unscheduled work and extended hours.
- Possible changes in housing.
- Contractor operations disrupted.

- Shortages in supplies, materials, and personnel.
- Unpredictable motorists.
- Stress.



Disaster Response

What Is an 'Incident Command' System?

An Incident Command System (ICS) coordinates all of the organizations at the scene of a disaster.

ICS is a structure to coordinate initial response through site clean up.

ICS procedures explain how to organize:

- personnel,
- facilities,
- equipment, and
- communications.



In a disaster response, a contractor and all employees work under the ICS.



The Incident Site Commander becomes the new site manager.

Training in the ICS is required for all workers who are engaged in disaster response.

What Is the Minimum Training Required for Disaster Response Work?

Workers should have basic training in disaster response work. Training should include:

- Incident Command System (ICS) approach.
- Common terminology for safety and health issues.
- Range of potential hazards to be encountered.
- Protective equipment and how to use it.
- Decontamination and rehabilitation process.
- Overview of the many organizations likely to be involved in disaster response.
- Pre-incident training such as the 16-hour OSHA Disaster Site Worker Course.



What Is Our Role in the ICS?

Road contractors are under the direction of the Incident Commander. ICS team members:

- **First Responders**
 - **Law Enforcement** secures the scene, controls the arrival and departure of all incident responders.
 - **Fire and Rescue** workers rescue victims, extinguish fires, and assess hazardous materials releases.
 - **EMS** team treats injured at the scene and determines their destination and means of transportation.
- **Second Responders**
 - **Transportation Agencies** take responsibility for traffic control and motorist information.
 - **Skilled Support Personnel (SSP)** include road construction workers trained in Disaster Response.



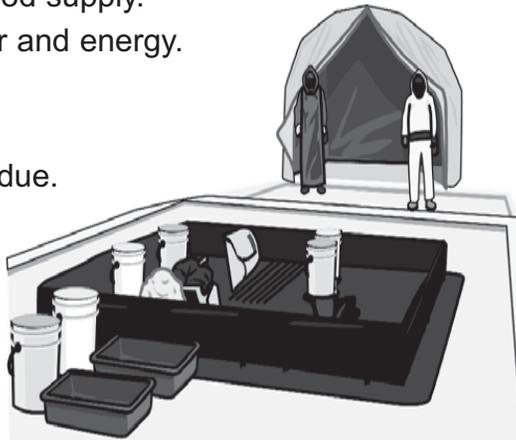
What Special Health Issues Arise During Disaster Response?

Disasters may create unique health challenges. Some possible health issues include:

- Pathogens (germs, bacteria, viruses).
- Contamination of water and/or the environment.



- Disruption of the food supply.
- Disruption of power and energy.
- Hygiene.
- Immunizations.
- Terror weapon residue.
- Personal protective equipment (PPE) use.
- Decontamination.
- Heat stress.



Disaster Response

What Are Some Hygiene Issues in Disaster Response?

Disaster response work may increase the risk of certain illnesses due to conditions created by the disaster.

To prevent health and hygiene problems, road workers should:

- Avoid puddles.
- Don't smoke in work area.
- Don't eat or drink in work area.
- Avoid touching face, mucous membranes, or cuts and wounds with contaminated hands.



Road workers doing disaster response work must:



- Disinfect contaminated hands, clothing, tools and equipment, and surfaces in work areas.
- Wash hands frequently with soap and fresh water.
- Drink bottled water, if possible. If not, water should be boiled or disinfected.

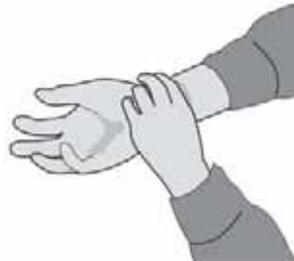


What Is Heat Stress?

If sweating does not cool the body, an illness known as heat stress may result. In hot conditions:



- Replace fluids (1 cup of water or sports drink every 20 minutes) and food (small frequent carbohydrate snacks).



- Watch for racing heart rates. If you experience a racing pulse, you should immediately stop work and rest.
- Take rest breaks in the shade.
- Watch your co-workers for any symptoms:
 - Confusion
 - Sweating too much
 - Throbbing headache
 - Excessive fatigue
 - Nausea

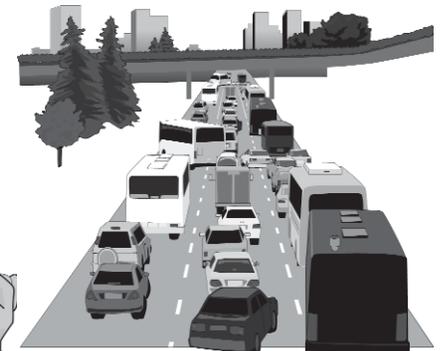


Heat stress is more likely to happen during vigorous activity in hot environments while wearing PPE.

What Special Safety Issues Arise During Disaster Response?

Disasters may create unique safety challenges. Some possible safety issues include:

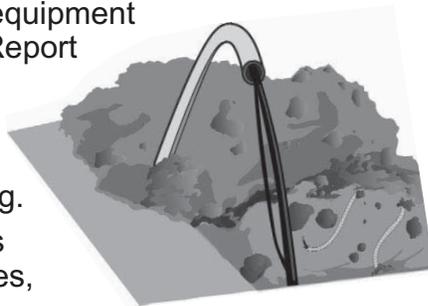
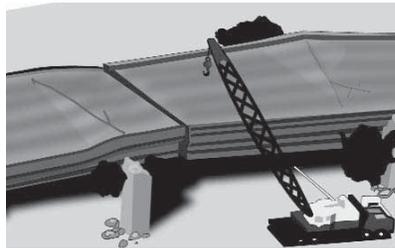
- Unstable work areas.
- Poor site conditions.
- Pressure to bypass normal safety protocols.
- Difficulty getting gear or materials.
- Internal and external communications.
- Unpredictable, panicked public/motorists.
- Internal traffic control.
- Equipment staging.



What Are Recommendations for Heavy Equipment in Unstable Conditions?

Operators must control unstable conditions. Here are some recommendations:

- Ensure work surfaces are stable.
- Clear debris from areas.
- Do a test lift or use equipment to test areas that appear to be stable.
- Keep equipment away from areas that may collapse, such as river or stream edges or embankments.
- Contact the utilities locator service to locate, mark, shut off, or purge all overhead and underground utilities.
- When working around pipelines, special training is required.
- Do not approach gas leaks. Instead, secure spark-producing equipment and evacuate the area. Report leak to utility company.
- Assume electrical lines are energized or may be energized without warning.
- Remember, downed lines can energize fences, pipes, trees, or other objects.



How Do We Deal with an Angry Public?

During disaster response, some members of the public may lose control of their emotions. Here are some things you and your employer should try to do:

- Stay calm and respond in a nonviolent manner.
- Keep yourself visible and in well lit areas.
- Make sure you can communicate with co-workers and call for help.
- Make allowances for quick egress.
- Create procedures to report violence to employers so they know trouble spots.
- Respond to public violence immediately. Provide workers with a means to record events, attackers, license tag numbers, and so on.
- Provide extra police protection and security when necessary.
- Provide positive separation between workers and motorists, whenever feasible.



How Does a Disaster Impact Our Lives?

Disaster response work may increase demands at work and at home. Here are some possible personal issues:

- Demands or requests for work despite family needs.
- Extended work schedule.
- Temporary housing and displacement from home.
- Psychological impacts.
 - Seeing victims, death.
 - Stressful situations.
 - Abnormal work conditions.
 - Possible violence.



How Do We Deal with Emotional Trauma During and After a Disaster Response?

Disaster response workers must be aware of the effects of emotional trauma.

We must recognize that counseling can be very important to maintaining health, relations with family and friends, and productivity on the job.

Here are several things that you and your employer should consider:

- Make sure everyone knows that symptoms usually lessen with time.
- Keep a watch on yourself. Typically, symptoms will disappear within weeks. If they don't, look for help.
- Counseling is beneficial to most workers. Employers should encourage it and make it available. Workers should take advantage of it and should encourage co-workers to do the same.
- Counseling is essential for some workers. Availability of counseling and encouragement from employers and co-workers can make the difference for these workers — many of whom are least likely to seek help.
- If help is not available from company and/or union programs, make contact with churches or with community mental health programs.

How Can We Reduce the Personal Impact of Disaster Response Work?

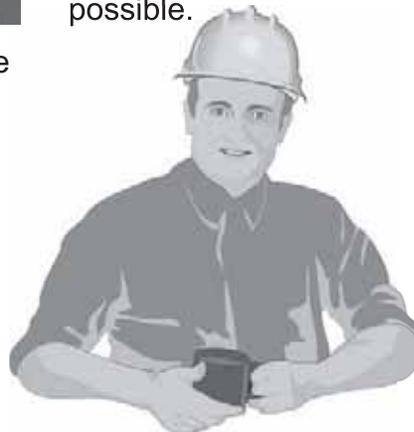
Take extra measures to cope with disaster work.

Reduce the impact in these ways:



- Recognize that disaster work makes us vulnerable to stress-induced illness.
- Set priorities and pace work to avoid physical exhaustion.
- Resume normal sleep schedule as soon as possible.

- Get plenty of rest and take frequent breaks **BEFORE** exhaustion builds up.
- Be alert to emotional exhaustion or strain.



If family or friends are not available, consult with the professionals at community health centers.

How Can Workers Prepare to Respond?

Know what is required before a disaster happens. Here are some things you can do:



- Learn about the Incident Command System (ICS) approach.
- Become qualified to use respirators.
- Learn about other protective equipment and how to use it.
- Take a Hazwoper Awareness or other training to learn about hazards and controls.
- Understand what your role will be and know to whom you report.
- Make a Travel Health Kit.
- Make sure immunizations are current.



What Is Required to Wear a Respirator?

Before you wear a respirator, you must have:

- training in respirator use,
- medical clearance, and
- a fit test.

Respirator training must include:

- Why a respirator is necessary.
- What makes up respiratory protection and its limits and capabilities.
- How to use respirators effectively, including in emergency situations.
- How to maintain, store, inspect, put on, remove, use, and check the seal or fit of a respirator.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
- The general requirements of OSHA 29 CFR 1910.134.



WARNING! Do not wear a respirator until you have been medically cleared.

What Is a Travel Health Kit?

A travel health kit contains essential items for extended stays. Recommended items:

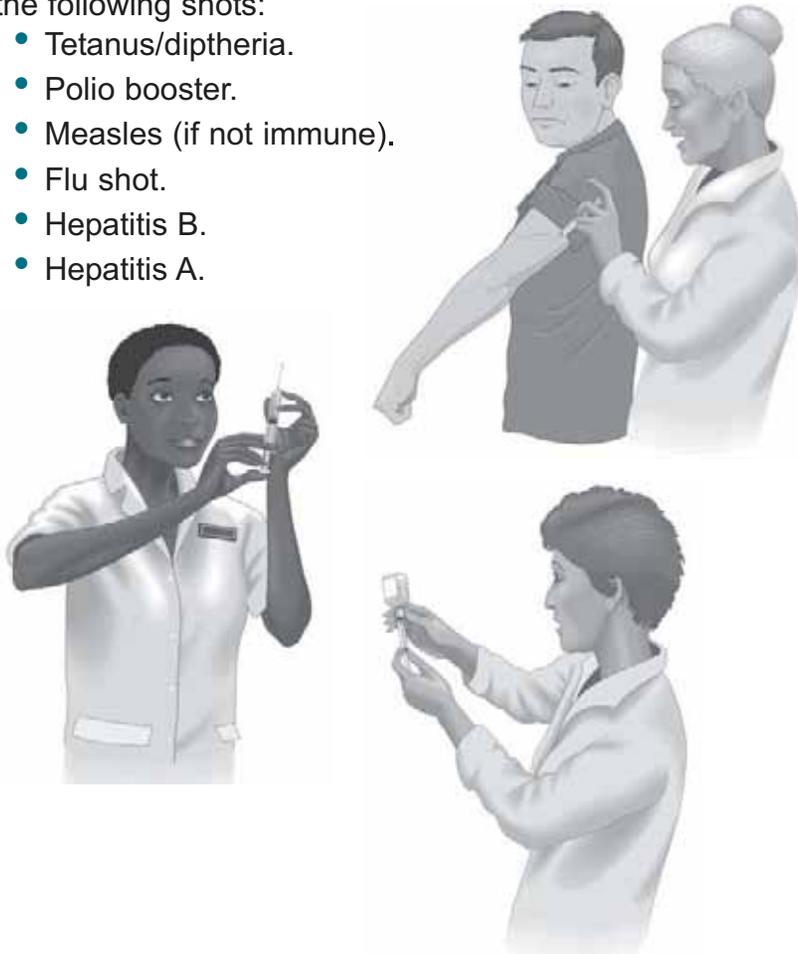
- Long pants and shirts.
- Boots.
- Hat with neck flap.
- Gloves.
- Rain gear.
- Sunglasses.
- Sun block SPF 15+.
- Insect repellent.
- Lip balm.
- Extra prescription glasses.
- Extra supply of medications.
- Toilet paper.
- Towel.
- Shower shoes.
- Ziplock bags.
- Candles and matches.
- Detergent.
- Small clothesline and pins.
- Alcohol based hand sanitizer.



What Immunizations May Be Needed?

Disaster response workers should have some or all of the following shots:

- Tetanus/diphtheria.
- Polio booster.
- Measles (if not immune).
- Flu shot.
- Hepatitis B.
- Hepatitis A.



How Can Contractors Prepare to Respond?

Pre-planning and communications are the keys to success. Plan for:



- Internal and external communications with workers and the public.
- Emergency contacts with state and local transportation and emergency response officials.
- Disaster Response Training for workers and managers.*
- Cross-train emergency team and use method to transfer responsibility.
- Plan to deal with family concerns.
- Contingency plan for office disruptions (staffing, payroll, contract issues).
- Housing, food, hygiene for workers.
- Stockpiling equipment, materials, supplies, and travel kits.



*Road workers who respond to a disaster should have pre-incident training such as the 16-hour OSHA Disaster Site Worker Course. In addition, the National Institute of Environmental Health Sciences has developed incident-specific training tools for likely hazards: hurricanes, dirty bombs, avian influenza, and wildfires. Visit <http://tools.niehs.nih.gov/wetp>.

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