

Ensuring Worker Safety and Health in the Aftermath of Disasters

The National Institute of Environmental Health Sciences (NIEHS) [Worker Training Program](#) (WTP) has responded to numerous disasters throughout its 30-year history. WTP funds nonprofit organizations, or grantees, to provide health and safety training for workers who may be exposed to hazardous materials and waste at work or while assisting with disaster or emergency response.


Since 1987, the program has supported the training of more than 4 million emergency responders and hazardous waste workers across the country. This training has played a critical role in response to a variety of natural and man-made disasters, as well as public health emergencies. This document provides an overview of WTP's involvement in disaster preparedness and response activities.

Available Resources

The WTP [network](#) has thousands of health and safety trainers across the country. Many of these trainers are available to provide training to workers who will be called upon during or in the aftermath of a disaster or public health emergency. WTP-funded organizations provide a wide range of training to prepare workers for post-disaster cleanup and emergency response. Additionally, through train-the-trainer courses, they help develop new trainers and build local capacity for workers and communities to provide disaster-specific and health and safety training in the future.

WTP's [National Clearinghouse for Worker Safety and Health Training](#) develops and maintains training materials for disasters and public health emergencies. Many of these materials can be modified and tailored for immediate use by organizations. Resources available on the Clearinghouse website include:

- A [disaster preparedness mobile app](#) that puts a full suite of training courses at the fingertips of workers exposed to hazards.
- An [online catalog](#) of hazardous waste and emergency response training curricula produced by WTP-funded organizations.
- Awareness-level training tools and pocket booklets that address a [variety of disasters and public health emergencies](#) (e.g., chemical



*Photo
courtesy of WTP*

Our Role in Disaster Response and Recovery

Under the National Response Framework's Worker Safety and Health Support Annex, NIEHS can be tasked to provide the following:

- Technical assistance for training such as instructional staff, curriculum-development experts, subject matter experts, and professional staff.
- Assistance and support in the development and delivery of site-specific health and safety training through qualified instructional staff from WTP-funded organizations.
- Safety training to worker target populations on the nature, location, and hazards related to the incident.
- Safety training to workers regarding mental health and stress, including recognizing signs and symptoms.
- Other assistance such as respirator fit-testing and distribution of personal protective equipment.

Similar tasks can be performed under the National Contingency Plan and the [National Disaster Recovery Framework](#). Over the years, WTP has been tasked to support the safety and health training of workers involved in disaster response and cleanup. Tasks have included creating a site-specific safety and health training curriculum; conducting training needs assessments; and deploying grantee trainers to provide training to responders, cleanup workers, and volunteers.

and biological terrorism, earthquakes, hurricanes, infectious diseases, and wildfires).

- Links to disaster-related resources from the federal government and other agencies.
- Reports, guidance documents, and research articles on disaster-related topics.
- Tools available in multiple languages (e.g., English, Spanish, Vietnamese).¹

A Track Record of Responses

WTP has been a national leader in training workers to respond safely to man-made and natural disasters, and infectious disease outbreaks.

Man-made Disasters

Deepwater Horizon Oil Spill (2010)

- WTP provided resources, trainers, and subject matter experts and coordinated with the Department of Labor's Occupational Safety and Health Administration (OSHA) to develop an awareness-level [oil spill response training tool](#) and an oil spill response pocket booklet.
- WTP also provided training to approximately 150,000 cleanup workers. Learn more about WTP's response to the Deepwater Horizon oil spill in a [June 2011 NIEHS Environmental Factor article](#).



Workers helping with cleanup following the Deepwater Horizon Oil Spill. (Photo courtesy of Deep South Center for Environmental Justice).

Terrorist attacks (2001)

- WTP developed the official safety and health training for site workers involved in the [World Trade Center cleanup](#) and delivered that training to the thousands of workers who toiled at ground zero. WTP also worked with OSHA to produce its Disaster Site Worker course.
- WTP developed the first course to train remediation workers to safely cleanup the anthrax contamination created by the mailing of spore-laden letters.

¹ Resources are translated into different languages as funding is available, with many discussed in this document already available in Spanish and other languages. This work supports WTP's commitment to language justice – that is, providing tools and resources in a language that is relevant, suitable, and easy to understand for target audiences. This expands the program's reach and ensures that workers from various backgrounds and cultures are protected in the aftermath of disasters.

- Learn more about WTP's awareness-level training materials on [chemical and biological terrorism](#) and [radiological dispersion devices](#) (dirty bombs) developed for skilled support personnel and other responders.

Disaster Resilience Training

With support from the U.S. Department of Health and Human Services' Substance Abuse and Mental Health Services Administration, WTP launched the Gulf Responder Resilience Training Project in 2012 to develop [mental health and resiliency training](#) for disaster-impacted communities. Training resources and materials developed under the program include:

- **Disaster Worker Resiliency Training:** Awareness-level training designed for disaster-impacted workers, including those working in disaster response, recovery, and rebuilding.
- **Disaster Supervisor Resiliency Training:** Awareness-level training for disaster supervisors, including managers, field coordinators, team leaders, and other personnel who supervise work or voluntary teams doing disaster rescue, recovery, or rebuilding work.
- **Disaster Care Provider Training:** Awareness-level training designed for community care centers, clinics, health care offices, hospitals, or disaster recovery centers.

Natural Disasters

Hurricanes Harvey, Irma, and Maria (2017)

- WTP provided technical training assistance—including site-specific health and safety training—to organizations employing hurricane response and recovery workers.
- WTP distributed hurricane response booklets to on-site workers and local organizations.
- Learn more about WTP's response to these hurricanes in two NIEHS Environmental Factor articles from [October 2017](#) and [March 2018](#).



Resident looks at damage left by hurricane in Puerto Rico. (Photo courtesy of WTP).

Debris removal: WTP developed a [debris removal training tool](#) and a [fact sheet](#) for small business owners, residents, and community and faith-based volunteer groups. These materials provide awareness-level information on post-disaster hazards associated with cleanup activities.

Hurricane Sandy (2012)

- WTP updated the hurricane response training tool and booklet to include cold weather hazards.
- WTP developed a mold remediation guidance document, as well as an awareness-level mold remediation training tool and a pocket booklet for workers, volunteers, and homeowners participating in hurricane response and cleanup activities.
- WTP supported training outreach coordinators in New York and New Jersey to make connections with target populations and provide training support.

Japan earthquake and tsunami (2011)

- WTP developed an awareness-level [earthquake and tsunami response training tool](#) that includes information on radiological hazards created by the Fukushima Daiichi nuclear power plant.

Haiti earthquake (2010)

- WTP staff and grantees met with local, state, and federal stakeholders in 2008 to finalize an [earthquake safety and health training tool](#) and an earthquake response booklet.
- NIEHS translated the materials into Haitian Creole after the earthquake struck Haiti in 2010 and shared them with Haitian and U.S. aid workers and responders.

Iowa floods (2008)

- WTP developed a flood response safety awareness booklet that was distributed to emergency responders in Iowa.

California wildfires (2007)

- WTP developed an [awareness-level training tool](#) highlighting the hazards workers face when responding to wildfires.



Fire in Mt. Baker-Snoqualmie Forest located in Washington State. (Photo courtesy of Western Region Universities Consortium).

Hurricanes Katrina and Rita (2005)

- WTP deployed trainers to the Gulf region to conduct training needs assessments, develop site-specific training programs, and establish relationships with other federal agencies involved in the response.
- WTP developed an awareness-level hurricane response training tool and a hurricane response pocket booklet in English, Spanish, and Vietnamese and provided safety training to 35,000 responders and cleanup workers.
- The program also established a Katrina field office to provide on-site support to awardees and federal agencies.

Infectious Disease Response

COVID-19 (2020)

- WTP launched the COVID-19 Virtual Safety Training Initiative with the goal of increasing health and safety for responders and workers who face potential exposure to SARS-CoV-2, the virus responsible for COVID-19 disease.
- WTP developed [COVID-19 training tools](#) for the public and essential workers, and a website with a toolkit and more resources. Learn more about WTP's response to COVID-19 in an [April 2020 NIEHS Environmental Factor article](#).



Fire fighters taking a HazMat operations course during the COVID-19 pandemic. (Photo courtesy of International Association of Fire Fighters).

Pathogen safety data guide: WTP developed a [pathogen safety data guide](#) and [training module](#) for program awardees and other occupational safety and health groups involved in infectious disease response. The module includes a PowerPoint presentation, a participant worksheet, a glossary, four case studies, and an instructor guide.

Ebola outbreak response (2014)

- WTP conducted a training needs assessment and gap analysis of training for Ebola and other emerging infectious diseases.
- WTP also developed [Ebola awareness- and operations-level training tools](#) for workers who may be at risk of exposure to the virus and developed a mobile app to provide quick and easy access to NIEHS Ebola training materials.
- Learn more about how WTP implemented Ebola training in the [July 2015 NIEHS Environmental Factor article](#).

H1N1 (swine flu) pandemic (2009)

- WTP developed [an awareness-level training tool](#) for workers who may be exposed to the virus.

Avian influenza response (2007)

- WTP co-hosted two meetings with the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS) on training workers for an avian influenza outbreak in the U.S. WTP developed a joint NIEHS/USDA-APHIS [awareness-level training tool](#) for those who may be exposed to avian influenza, and an avian influenza response booklet.



First responders receive training on use of personal protective equipment. (Photo courtesy of Universidad Metropolitana).

Lessons Learned Workshops

The WTP network provides essential on-the-ground safety and health training in the aftermath of disasters, and their curricula are distributed to and used by organizations throughout the country. But what happens after the disaster? How can we use what we learned during response and recovery operations to improve future responses?

WTP understands the importance of learning from past disasters. The program holds semi-annual technical workshops that bring together program grantees and other stakeholders to discuss current and emerging training issues, and to share best practices and lessons learned. These events also provide a valuable opportunity for networking and collaboration. Workshop reports summarize key points from the discussions, as well as any recommendations or action items. These reports are then distributed to participants and posted on the National Clearinghouse website.

Below is a sample list of WTP technical workshops and their corresponding reports, which cover a broad range of topics related to disasters and preparedness.

- [Using Best Practices to Sustain Training Programs During COVID-19 and Other Disasters \(2021\)](#)
- [Protecting Infectious Disease Responders During the COVID-19 Outbreak \(2020\)](#)
- [Infectious Diseases Workshop \(2016\)](#)
- [Deepwater Horizon Lessons Learned Workshop: Improving Safety and Health Training for Disaster Cleanup Workers \(2011\)](#)
- [Local, State and Federal Partnerships for Chemical Preparedness and Response \(2009\)](#)
- [Ensuring Skilled and Other Support Personnel Are Prepared for Disasters \(2008\)](#)
- [Disaster Response Training: From WTC to Katrina—Five Years of Lessons Learned \(2006\)](#)
- [Learning from Disasters: Health and Safety Training in the Aftermath of Hurricane Katrina \(2006\)](#)
- [Worker Training in a New Era: Responding to New Threats \(2002\)](#)
- [Learning from Disasters: Weapons of Mass Destruction Preparedness Through Worker Training Workshop \(2002\)](#)

For More Information

For more information about WTP's disaster response and preparedness efforts and program contacts, please visit the following pages:

- [NIEHS Worker Training Program](https://www.niehs.nih.gov/careers/hazmat/about_wetp/index.cfm)
- [NIEHS HAZMAT Disaster Preparedness Training Program](https://www.niehs.nih.gov/careers/hazmat/training_program_areas/hdpt/index.cfm)
- [NIEHS Worker Training Program Disaster Preparedness and Response](https://tools.niehs.nih.gov/wetp/index.cfm?id=556)
- [National Clearinghouse for Worker Safety and Health Training](https://tools.niehs.nih.gov/wetp/)