



National Institute of Environmental Health Sciences
Your Environment. Your Health.

NIEHS Worker Training Program: Responding to Disasters & Available Resources

**National Response Team's 2024 Worker Safety & Health Technical
Conference**

March 14, 2024

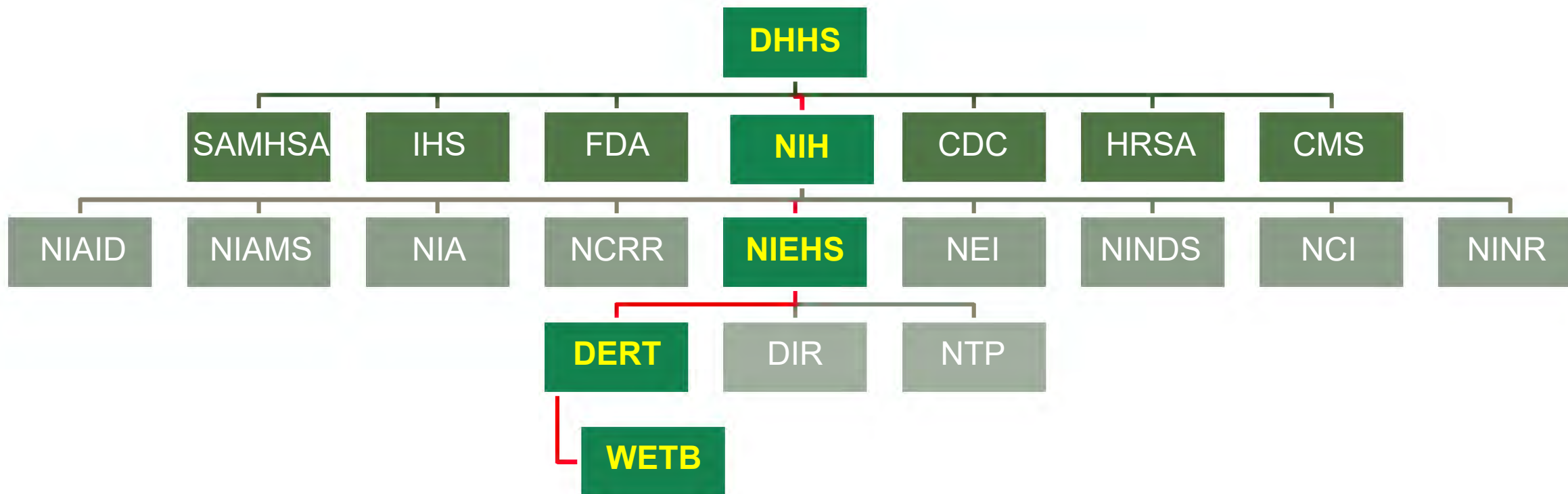
1 p.m. – 2 p.m.

Jim Remington, RN

NIEHS Worker Training and Education Program



Where We Are in the Federal Food Chain:



NIEHS Worker Training Program (WTP): Mission & Network

Mission: Prevent work-related harm by providing training programs for hazardous materials handlers, chemical emergency responders, and waste cleanup workers.



Funds **17** grant recipients/consortia through cooperative agreements representing **over 100** nonprofit safety and health training organizations.

Provides training in **all 50 states**, Washington D.C., and U.S. territories.

WTP History: Superfund Amendments & Reauthorization Act



Established under **Superfund Amendments and Reauthorization Act (SARA) of 1986, Section 126(g)**

SARA initiated the **Hazardous Substance Basic Research and Training Program**

Hazardous Substance Basic Research and Training Program

Superfund Research Program (SRP)

Fosters multidisciplinary research, fundamental creative discoveries, and innovative research strategies focused on solving problems related to Superfund sites.

Worker Training Program (WTP)

Trains and educates workers who are or may be engaged in activities related to hazardous waste removal or containment, or emergency response.

Superfund Amendments & Reauthorization Act (SARA)

- WTP established under **Superfund Amendments and Reauthorization Act (SARA) of 1986, Section 126(g)**.
- SARA authorized a program for **training and education of workers** who are or may be engaged in activities related to hazardous waste removal, containment, or emergency response.
- Congress assigned responsibility for **administering the grant program to NIEHS**.
- “**Labor unions were of paramount importance in securing the training provisions of SARA** because of their growing knowledge of and concern about the hazards to workers’ lives and health from the toxics economy.” (Slatin C and Dunn ML, 2006, New Solut)



WTP: Preparing Workers for Hazardous Materials & Emergency Response



Increase worker safety and health

Trained nearly 5 million workers since 1987, helping businesses and municipalities keep worksites and communities safer.



Prepare workers for disasters and emergency response

Trained thousands of workers for recovery in response to natural and man-made disasters, such as the World Trade Center attacks, western wildfires, Hurricanes Sandy and Harvey, Deepwater Horizon oil spill, and Ebola and COVID-19.



Provide workforce development and job placement for individuals experiencing underemployment

Reached approximately 14,500 individuals in 30 communities and sustained an average job placement rate of 70%.

WTP Program Metrics To Date (1986-present)



280,000+ courses



5 million+ workers trained



50 million+ contact hours



WTP Funding Mechanisms & Program Areas

U45

Cooperative Agreements



Hazardous Waste Worker Training Program

required component



HAZMAT Disaster Preparedness Training Program



Environmental Career Worker Training Program

UH4

Cooperative Agreements



NIEHS/U.S. DOE Nuclear Worker Training Program

R43/44

SBIR Grants



**Small Business Innovation Research (SBIR)
E-Learning for HAZMAT**

Note: A cooperative agreement is distinctly different from a grant, in that it provides for “substantial involvement” between the Federal agency or pass-through entity and the grant award recipient.

WTP Priorities: Relevant Across All Program Areas

- Push an **all-hazards approach** to training to cover existing and emerging threats.
- Expand focus on **infectious disease, opioids, climate change, equity, and justice.**
- Promote **Justice40 Initiative** and **ECWTP.**
- Continue training and focus on **under-resourced** and **Tribal communities.**
- Encourage grant recipients to use **adaptable and innovative methods** to respond to future training needs.
- Continue focus on **evaluation** across all programs.
- Expand **partnerships** at the federal, state, and local levels.



WTP Engages with Other Federal Agencies & Working Groups

- U.S. Department of Energy (DOE), Office of Environmental Management
- U.S. Department of Health and Human Services, Administration for Strategic Preparedness and Response (ASPR)
- U.S. Department of Labor, Occupational Safety and Health Administration (OSHA)
- Centers for Disease Control and Prevention (CDC)
- National Institute of Occupational Safety and Health (NIOSH)
- Substance Abuse and Mental Health Services (SAMHSA)
- NIH Office of Behavioral and Social Sciences Research (OBSSR)
- Interagency Working Group on Environmental Justice
- Federal Interagency Working Group on Brownfields





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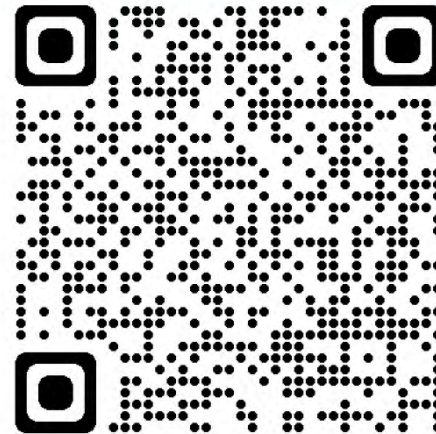
Disaster Preparedness and Response: Ensuring Safety of Workers & Communities

NIEHS/Department of Energy (DOE) Nuclear Worker Training Program

Supporting DOE sites with occupational health and safety training of workers on the:

- Handling of hazardous materials and waste
- Participation in emergency response
- Safety during research and testing

Authorized by National Defense Authorization Act: Section 3131 (FY 1992) and implemented through an Interagency Agreement with DOE Office of Environmental Management (EM)



Climate Change, Health Emergencies, and Environmental Justice

- Many hazards are created during and after climate-related events, man-made disasters, and public health emergencies
- WTP is a participant in the National Response Framework, National Disaster Recovery Framework, and the National Contingency Plan
- WTP coordinates a large network of grant recipients who deliver health and safety training on hazards related to tornadoes, hurricanes, flooding, wildfires, and infectious disease
- Targeting workers, businesses, and communities at highest risk





Hurricane Katrina 2005 (NRF)

OCT-05-2005 19:26 TECH SUPPORT 202 693 1644 P.02/02

ESF MISSION ASSIGNMENT SUBTASKING REQUEST

FEMA-Assigned MA Number: 1604DR-MS-OSHA-01 ESF Primary Agency: OSHA

Subtasked Agency: NIEHS State: Disaster No. 2005082401-
Hurricane Katrina

Taking Statement/Statement of Work

NIEHS is tasked with developing course materials to train trainers, identify training locations, deploy trainers, and deliver training to target populations of federally supported responders in the Katrina response zone. In

Taking Statement/Statement of Work

NIEHS is tasked with developing course materials to train trainers, identify training locations, deploy trainers, and deliver training to target populations of federally supported responders in the Katrina response zone. In conducting this tasking, DOL/OSHA will provide NIEHS with contact information at the Joint Field Offices to coordinate these training activities with the other Federal Agencies. NIEHS will award administrative supplements to its current Worker Training Awardees to provide response orientation training to federal employees and federally-sponsored contractors engaged in hurricane recovery and remediation activities. In conjunction with OSHA, NIEHS WETP will develop a process to share and distribute relevant training and education materials through its web site and training distribution network within the Katrina response zone.

Authority Official, Subtasked Agency

Authorizing Official, ESF Primary Agency

Following signatures please provide information copy to FEMA MAG and Project Officer.

December 2004 Financial Management Support Annex National response Plan FIN-9

Katrina Field Training



Superstorm Sandy Training Response 2012 (NDRF)



WORKER EDUCATION AND TRAINING PROGRAM

NIEHS Hurricane Sandy
Response Report

September 2013



In 2012, Superstorm Sandy caused extensive damage throughout the East Coast as it released torrential rains, ferocious winds, and widespread flooding.

In response to Superstorm Sandy, NIEHS activated its local trainers to educate cleanup workers and community members about the health hazards found following hurricanes and floods.

After the site hazard assessment identified mold as one of the greatest hazards, the WTP and the National Clearinghouse created the NIEHS Mold Remediation Guidance and the Mold Clean Up and Treatment Orientation PowerPoint training and booklet.

Approximately 155,000 people were trained under the program and more than 35,900 English booklets, 15,700 Spanish booklets, and 290 Vietnamese booklets were distributed to recovery workers, homeowners, and volunteers.



National Contingency Plan

Federal Agency Pollution Removal Funding Authorization

Recipient Agency: U.S. Department of Health & Human Services

Address: National Institute of Environmental Health Sciences
79 Alexander Dr.
Research Triangle Park, NC 27709

1. Purpose

This document authorizes reimbursement to the Recipient Agency from the Oil Spill Liability Trust Fund or CERCLA funds for certain removal costs incurred in response to the following pollution incident, Deepwater Horizon MC252, Federal Project Number/CERCLA Project Number, N10036. This funding authorization is expressly contingent on the Recipient's compliance with all requirements contained herein.

2. Approved Functions and Reimbursement Limit

Costs will be reimbursed only for actions that are directed or approved in advance by the FOSC. Approval may be verbal or written. Assessment, restoration, rehabilitation or replacement of natural resources damaged by the spill are not covered.

NIEHS TRAINING Response in partnership with BP, OSHA and NIOSH

- BP, TEEEX, OSHA and NIEHS developed oil spill response training tool on April 27, 2010 as the spill expands in the Gulf of Mexico.
- NIEHS begins work with BP, OSHA and NIOSH as part of the worker safety assessments on May 1st within the Louisiana Incident Command's Area of Operations.
- Louisiana and Mississippi Incident Command Center' teams deploy HSE staff, subject matter experts and designated instructor training teams (Petroleum Extension Council, NIEHS and TEEEX) to deliver worker protection outreach training.



BP, USCG, OSHA, NIEHS, and NIOSH meet to assess worker protection issues in the Louisiana Incident Command Center in Houma, LA on Tuesday, May 3, 2010.



Field Training for Vessels of Opportunity (VOO) workers in Venice, LA

NIEHS WTP 2017-18 Hurricane Response Activities

- **Harvey, Maria, Florence and Irma: HHS Mission Assignment to do a training needs assessment:**
 - **Staff, contractors, and trainers on the ground**
 - **Implementing Train-the-Trainer and worker/volunteer safety trainings**
 - **Distributing personal protective equipment (PPE)**
 - **Coordinating with Federal Joint Field Office, State Public Health, Local Public Health, Non-Profits, and Foundations**
 - **Making connections at federal, state, and local levels**
 - **Planning for a Disaster Train-the-Trainer courses**
 - **Coordinating with Public Health Researchers**



WTP: Special Appropriations and Funding for Disasters and Emergencies

- Hurricane Katrina (2005)
- Deepwater Horizon Oil Spill (2010)
- Superstorm Sandy (2012)
- Ebola Virus Disease (2014)
- Disaster Relief Act, 2019
- COVID-19 (2020)
- Consolidated Appropriations Act (2023)



WTP Grant Recipients Respond to Disasters & Emergencies Across the Country

- **WTP State Profiles:** Short (2-page) fact sheets that highlight grant recipient training accomplishments in various states.
- Learn more about grant recipients' disaster preparedness and response efforts across the country related to:



Wildfires



Chemical incidents (oil spills, train derailments, public infrastructure)



Hurricanes



Biological/infectious agents



Tornadoes



Fentanyl, opioids, methamphetamine lab response



Flooding



Worker Training Program: North Carolina

The NIEHS Worker Training Program (WTP) annually funds training for fire workers through 220 health and safety courses in North Carolina. Recipient WTP grants lead trainings to prepare workers to perform their job safely, hazardous materials, and respond to disasters in their communities.

Courses include:

- Basic Supervised Site Worker and Site Worker Refresher
- Confined Space Entry and Rescue
- Crew and Forklift Operator Safety
- Disaster Site Safety Assessment
- Emergency Response Awareness
- General Construction and General Industry Safety
- Hazardous and Com
- Hazardous Transport
- Self-Rescue
- Woodburn Awareness
- Laboratory
- Microbial Awareness
- Personal Protective Equipment
- Regulation

Training Highlights

Hurricane response and recovery WTP grantees deliver training to help North Carolina workers and communities prepare for and respond to hurricanes and flooding.

In response to Hurricanes Matthew and Florence, the International Chemical Workers Union Council Center for Worker Health and Safety Education partnered with the Robeson County Disaster Recovery Coordinator to provide mold awareness and remediation training. They delivered a train-the-trainer course to disaster case worker analysts, local government officials, and community members. The course participants will then disseminate the knowledge to recognize mold hazards and if a mold cleanup is in order.

Additionally, the United Steelworkers Tony Mazzocchi Center deployed its Emergency Response Trainers (ERTs) to hurricane-impacted regions in 11 states where they delivered training on mold remediation and personal safety, also distributed emergency supplies and personal protective equipment to community members.

PO Box 12050 • Research Triangle Park, NC 27709
Phone: (919) 843-3844 • www.niehs.nih.gov
June 2020

Worker Training Program: California

The NIEHS Worker Training Program (WTP) annually funds training for workers throughout 400 health and safety courses in California. The WTP grants lead trainings to prepare workers to handle hazardous materials in their communities.

Courses include:

- Adverse Abatement
- Basic Supervised Site Worker and Site Worker Refresher
- Emergency Response
- Respiratory Protection
- Hazard Communication
- Haz Mat
- HAZOP
- HAZWOPER
- HAZMAT
- HAZMAT
- HAZMAT

Training Highlights

Wildfire Emergency Preparedness and Response Training

Due to increasing wildfires in California, WTP grantees continue to do business initiatives to increase awareness and prepare workers for the any natural disasters deliver critical emergency preparedness and response for responders, construction workers, day laborers, and workers who do not have a degree or an occupational certificate.

In Southern California, the Western Region Universities Consortium (WRUC) delivered training to help day laborers and truckers workers protect themselves and their families from wildfire hazards. The training was held in a community center in the National Day Laborer Organizing Network.

In response to the devastating, fire and camp wildfires, international firefighters trained and analyzed as a group operators using training for the Act of 2016 the training included fire as a new procedure for Emergency Response HAZWOPER courses for more than 50 workers who had no prior employment in wildfire recovery operations with people who have necessary skills to assist with future disaster relief.

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March 2020

Worker Training Program: New Mexico

The NIEHS Worker Training Program (WTP) annually funds training for about 3,500 workers through 200 courses in New Mexico. Recipients of NIEHS grants lead training to prepare workers to handle hazardous materials and respond to disasters in their communities.

Courses include:

- Adverse Abatement
- Emergency Response
- Hazard Communication Safety
- Hazard Communication
- Industrial Clean Air Assessment and Operations
- Confined Space Rescue
- HAZOP
- HAZWOPER
- HAZMAT
- HAZMAT
- HAZMAT

Training Highlights

Building Capacity with Bilingual Americans

Arizona State University (ASU), part of the Western Region Universities Consortium, offered courses to train workers in New Mexico and Arizona, as part of a program coordinated with the U.S. Department of the Interior Bureau of Indian Affairs (BIA), through the Navajo Region Division of Environmental and Safety Management.

In 2017, ASU provided 200 Native American workers in 20 courses for the BIA. ASU is the only provider of hazardous waste operations and emergency response training, as well as other key hazardous materials courses, for BIA in this region.

Additionally, Oklahoma State University (OSU) provided training for workers in Oklahoma, including the Navajo Nation, and the Navajo Nation. OSU provided training for workers in Oklahoma, including the Navajo Nation, and the Navajo Nation.

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February 2020

Highlights: WTP Grant Recipients Respond to Disasters



In response to Hurricane Harvey, grant recipients:

- Delivered a bilingual Disaster Train-the-Trainer course for day laborers, faith groups, volunteer groups, and local residents.
- Conducted mold awareness training for two environmental justice communities.
- *(Grant recipients: International Chemical Workers Union Council Center, United Steelworkers, and South Center for Environmental Justice)*



To reduce impacts of flooding in Chicago, grant recipients:

- Proactively recruit and train potential employees to install green infrastructure projects (High Bridge).

(Grant recipient: OAI, Inc.)



Photo of damages left in neighborhood after Hurricane Harvey in Texas.

Fe Y Justicia Bilingual Train-the-Trainer in Houston: *Training and PPE Ensemble*



Program Spotlight: Partnership with Tribal Colleges and Universities (TCUs)

- TCUs:
 - Located in some of the nation's most impoverished areas
 - Provide essential technical education
 - Foster American Indian culture, language, and tradition
- WTP grant recipient Partnership for Environmental Technology and Education (PETE) partners with TCUs to provide disaster response training
- PETE provided trainings at:
 - Saginaw Chippewa College (Mount Pleasant, MI)
 - OSHA 15 Disaster Site Worker
 - Nueta Hidatsa Sahnish College (Newton, ND)
 - OSHA 15 Disaster Site Worker
 - Prince William Sound College (Valdez, AK)
 - Oil spill and response courses



A Prince William Sound College student takes part in oil spill-response training on a fishing vessel.

Highlights: WTP Grant Recipients Respond to Disasters



Following California's worst wildfire year in recorded history (2020), grant recipients:

- Trained over 500 workers in fire prevention, disaster preparedness and response, and emergency regulations to protect workers from wildfire smoke.

(Grant recipient: Western Region Universities Consortium)



Before the catastrophic, mile-wide tornado in Kentucky, grant recipients:

- Partnered with Kentucky state agencies.
- Provided courses on hazardous material response and confined space awareness.

(Grant recipient: OAI, Inc.)



Photo of damages left after wildfire.

Partnerships are Key for Disaster Preparedness & Response

- Partnerships are a crucial for success in disaster preparedness and response.
- Grant recipients partner with:
 - Federal, state, and local agencies
 - Worker centers
 - Tribes and Indigenous groups
 - Community and faith-based organizations
 - Unions
 - Volunteer groups and organizations



Deep South Center for Environmental Justice (grant recipient) partnered with community-based organizations to provide “muck and gut” trainings following Hurricane Ida.

Highlights: WTP Grant Recipients Respond to Disasters



In response to the COVID-19 pandemic, grant recipients:

- Provided culturally-appropriate health and safety training in multiple languages to help reduce the spread of the virus.
- Made referrals for basic needs, such as housing and food distribution.

(Grant recipients: New England Consortium, Sustainable Workplace Alliance, Atlantic Center, United Steelworkers, and International Chemical Workers Union)



To prepare for rail incidents (like the derailment in East Palestine), grant recipients:

- Develop safety courses focused on preventing and responding to uncontrolled releases of harmful chemicals for rail workers and community members.

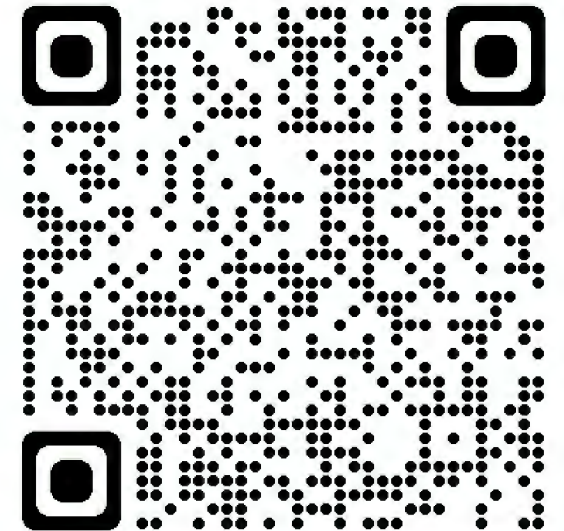
(Grant recipient: International Brotherhood of Teamsters)



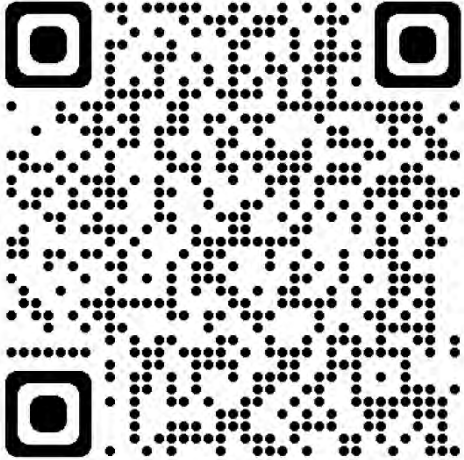


Available Tools & Resources: Ensuring Safety of Workers & Communities

National Clearinghouse for Worker Safety and Health <https://tools.niehs.nih.gov/wetp/>



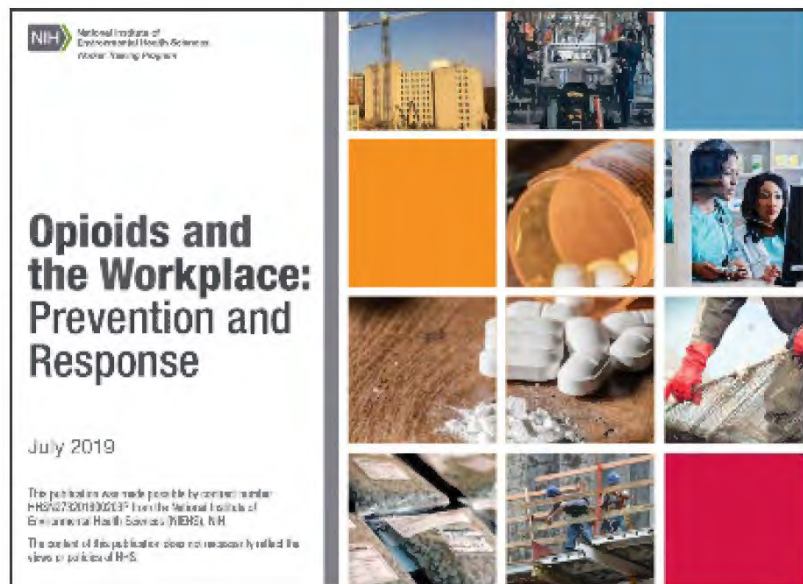
FREE Booklets: <https://tools.niehs.nih.gov/wetp/booklets/index.cfm>



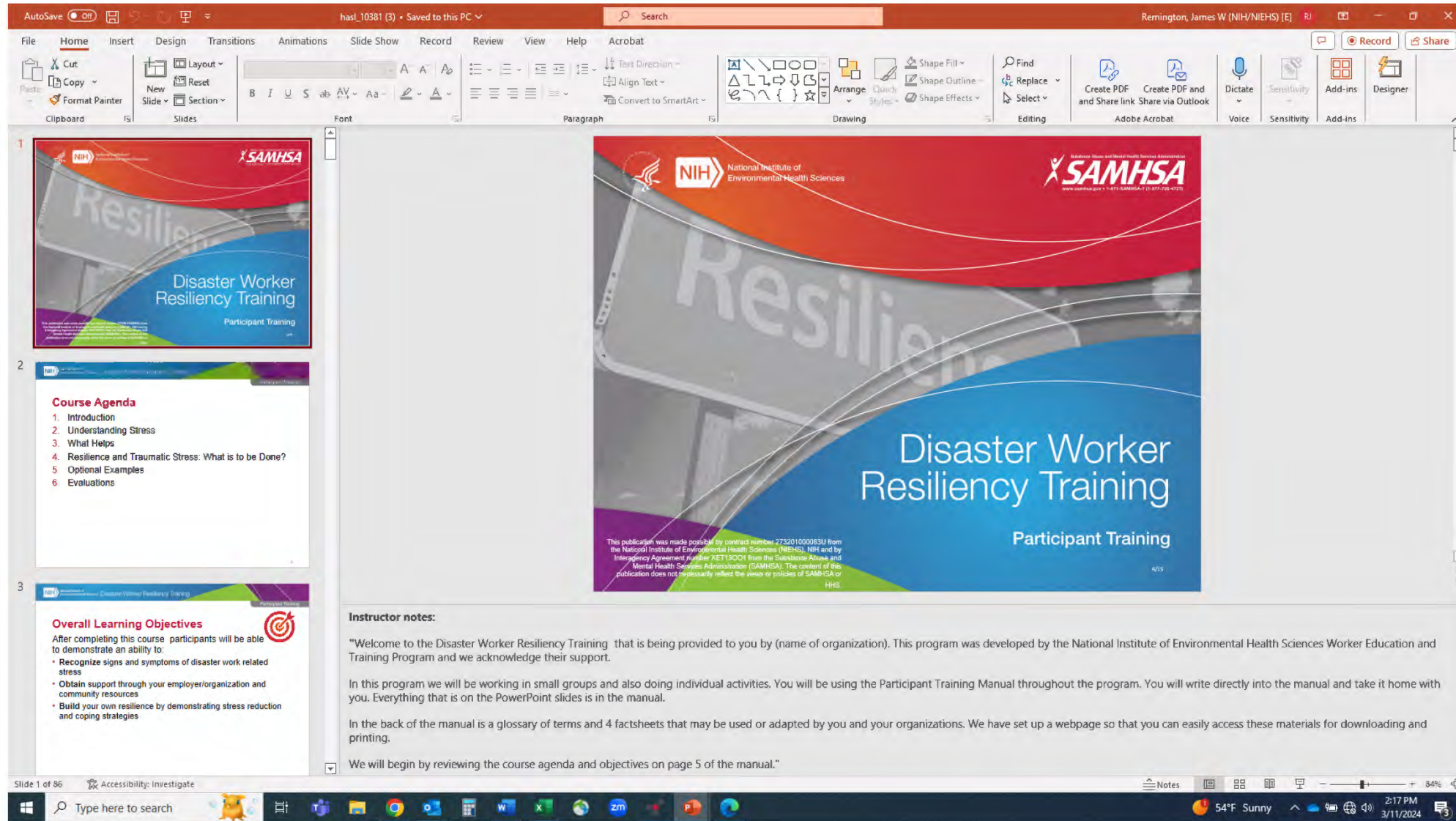
- Avian Influenza booklet (English)
- Protecting Yourself from Avian Influenza
- Avian Influenza booklet (Spanish)
- Flood Response Orientation booklet (English)
- Safety Awareness for Responders to Floods
- Flood Response Orientation booklet (Spanish)
- Safety Awareness for Responders to Floods: Protecting Yourself While Helping Others
- Hurricane Safety and Health booklet (English)
- Safety Awareness for Responders to Hurricanes
- Hurricane Safety and Health booklet (Spanish)
- Safety Awareness for Responders to Hurricanes
- Hurricane Safety and Health booklet (Vietnamese)
- Safety Awareness for Responders to Hurricanes
- Mold Clean-up and Treatment booklet (English)
- Health and Safety Essentials for Workers, Volunteers, and Homeowners
- Mold Clean-up and Treatment booklet (Spanish)
- Health and Safety Essentials for Workers, Volunteers, and Homeowners
- Oil Spill Safety and Health booklet (Spanish)
- Safety Awareness for Oil Spill Cleanup Workers
- Wildfire booklet (English)
- Health and Safety Essentials for Workers, Volunteers, and Homeowners

Training Tools, Resources for Disasters & Emergencies

Curricula, PowerPoint slides, and booklets for grant recipients and trainers to use to deliver health and safety training to target audiences



Example of Training Tool



The screenshot displays a Microsoft PowerPoint presentation titled "Disaster Worker Resiliency Training Participant Training". The slide content includes:

- Course Agenda:**
 1. Introduction
 2. Understanding Stress
 3. What Helps
 4. Resilience and Traumatic Stress: What is to be Done?
 5. Optional Examples
 6. Evaluations
- Overall Learning Objectives:**

After completing this course participants will be able to demonstrate an ability to:

 - Recognize signs and symptoms of disaster work related stress
 - Obtain support through your employer/organization and community resources
 - Build your own resilience by demonstrating stress reduction and coping strategies
- Instructor notes:**

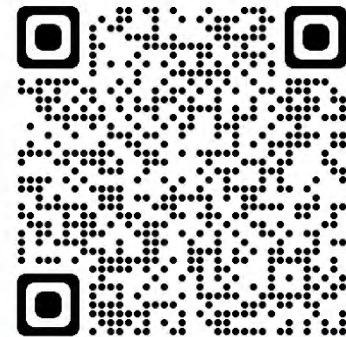
"Welcome to the Disaster Worker Resiliency Training that is being provided to you by (name of organization). This program was developed by the National Institute of Environmental Health Sciences Worker Education and Training Program and we acknowledge their support.

In this program we will be working in small groups and also doing individual activities. You will be using the Participant Training Manual throughout the program. You will write directly into the manual and take it home with you. Everything that is on the PowerPoint slides is in the manual.

In the back of the manual is a glossary of terms and 4 factsheets that may be used or adapted by you and your organizations. We have set up a webpage so that you can easily access these materials for downloading and printing.

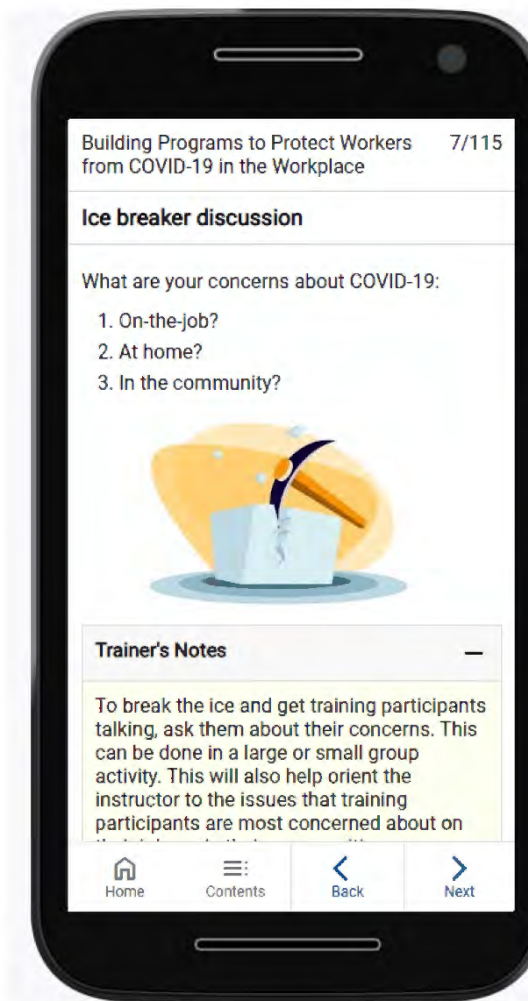
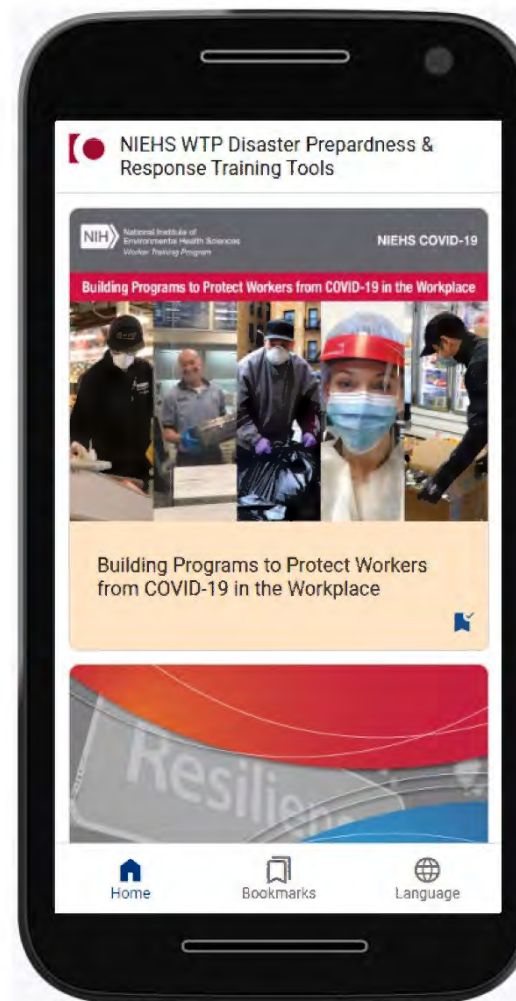
We will begin by reviewing the course agenda and objectives on page 5 of the manual."

The presentation interface shows the ribbon with tabs for File, Home, Insert, Design, Transitions, Animations, Slide Show, Record, Review, View, Help, and Acrobat. The Windows taskbar at the bottom shows the time as 2:17 PM on 3/11/2024, with a temperature of 54°F and a sunny forecast.



Mobile App: Easy Access to Training Tools

- To facilitate easy access to all training tools, especially in areas with limited internet service, WTP transferred training tools to an online mobile app.
- The app, launched in June 2023, enables access to saved training tools offline.
- Speaker/trainer notes provide additional information and links.
- Available for iOS and Android phones.



Fact Sheets & Technical Briefs for Workers

Fact sheets to share important health and safety topics with workers and communities.

NIH National Institute of Environmental Health Sciences
Worker Training Program

URBAN FLOODING: Hazards and Tips for Prevention

This fact sheet is intended for workers, communities, and businesses involved in disaster preparedness and recovery in urban areas.

Flooding in urban areas has become more common due to the rising number of hurricanes and other extreme weather events. These flooding events are linked to high rates of rainfall that overfills urban systems' capacity for excess water.

Flooding events can be extremely dangerous, especially fast-moving water that rapidly fills streets, houses, and buildings before people can safely evacuate. Some urban communities experience repeated flooding events which can be stressful for businesses due to the financial strain, emotional stress, and hardships of temporarily living in a damaged home.

Clean-up and repairs after flooding can expose people to a variety of hazards, all of which can be avoided. This fact sheet provides some tips to help workers and businesses protect themselves during or after urban flooding events.

What health hazards should I be aware of during or after a flood?

Structural hazards:

- Trauma from tripping, falling, stepping on sharp objects, and using chainsaws. Broken bones, severe head injuries, and lacerations may be caused by falling debris from unstable structures, walls, working on ladders, or improper use of equipment.
- Burns and electrocution from live electrical wires. The burns and damage from electricity can cause severe loss in damage and even death.

Harmful exposures:

- Carbon monoxide in the air when using gas-powered equipment indoors, such as power washers. Without good ventilation, carbon monoxide poisoning can lead to serious medical problems and death.
- Infectious agents carried in contaminated floodwater. Sewage backups can contaminate floodwaters which collect in structures below the ground. This water may contact open wounds, causing skin infections, or be swallowed accidentally, causing vomiting or diarrhea.
- Mold can lead to or worsen lung health issues like asthma and chronic obstructive pulmonary disease. Chronic, unresolved moldiness can lead to mold growth on walls and furniture in flooded spaces. Mold spores can spread in the air and be breathed in when cleaning spaces.
- Toxic chemicals, like gasoline, oil, or industrial toxins can cause skin irritation or other problems if inhaled.

NIH National Institute of Environmental Health Sciences
Worker Training Program

COVID-19 VARIANT

WTP COVID-19 BRIEF

Addressing Occupational Exposure to SARS-CoV-2 Variants

This brief provides background information on what SARS-CoV-2 variants are, and what controls are needed to protect workers from occupational exposure to SARS-CoV-2 variants. The most common SARS-CoV-2 variant currently circulating in the U.S. is the Delta variant, but this brief can apply to future variants. This document is part of a series of COVID-19 briefs prepared by the National Institute of Environmental Health Sciences (NIEHS) Worker Training Program (WTP).

What are variants?

The SARS-CoV-2 virus continues to change so that it can survive and replicate as it passes between people. Viruses do this to continue surviving in the environment so that they can remain infectious. Just like humans, animals, and plants adapt to their environments to survive, so do viruses.

Viruses do not change how the SARS-CoV-2 virus works, but they can affect how contagious the virus is, how easily it can evade the immune response, and therefore how much more easily it can cause disease or transmit from one person to another. Variants are expected and they can show up and then disappear.¹ The word variant can be used interchangeably with strain, form, or mutation. Some variants have no impact, while others – like the Delta variant – can have a drastic impact on populations of workers and the communities they live in.

Some variants cause similar symptoms to the original COVID-19 infection. However, some can cause more severe infections and result in larger numbers of hospitalizations and deaths, especially in people who are not vaccinated. Variants can result in an increased number of infections, especially among populations

of workers that serve the public and work in crowded or small spaces, like correctional facilities, meat processing plants, transportation, schools, and retail and healthcare industries.

Variants can circulate around the world as people travel. Variants of the SARS-CoV-2 virus are named according to the Greek alphabet. This naming system results in less stigma or confusion about where the variants originate.²

What about workers who have been vaccinated or had COVID-19?

The WTP COVID-19 brief, Key Information for Workplace and Training Providers: Policies for Fully Vaccinated People, states that COVID-19 vaccine research is ongoing. It is important to stay informed about how long vaccine protection lasts and how effective these vaccines are, especially as new variants emerge. Fully vaccinated people can be exposed to and get infected with a variant, but they are generally infectious for a much shorter period and have less severe symptoms compared to those who are not vaccinated.³ This can also vary from person to person depending on their health status.

1. CDC. What You Need to Know about Variants. 2. WHO. Briefing SARS-CoV-2 Variants. 3. U.S. Centers for Disease Control and Prevention. Key Information for Workplace and Training Providers: Policies for Fully Vaccinated People.

NIH National Institute of Environmental Health Sciences
Worker Training Program

WTP COVID-19 BRIEF:

Selection and Use of Portable Air Cleaners to Protect Workers from Exposure to SARS-CoV-2

This brief provides an overview of key issues in the selection and use of portable air cleaners to prevent the spread of infectious diseases. It is an abbreviated version of NIEHS WTP Selection and Use of Portable Air Cleaners to Protect Workers from Exposure to SARS-CoV-2.

Ventilation and filtration are important to prevent transmission of COVID-19 and other infectious diseases. SARS-CoV-2, the virus that causes COVID-19, is mainly spread through inhalation of virus-contaminated air when an infected person speaks, laughs, coughs, sings, or sneezes. Physical distancing alone will not prevent the build-up of viral particles in a room or workspace.

What are portable air cleaners?

Portable air cleaners and HVAC filters are designed to capture air pollutants that pass through them. When used properly, they can help reduce the spread of airborne viruses in a building or enclosed space. Portable air cleaners may be particularly helpful in buildings that do not have mechanical HVAC systems or when changes to existing HVAC systems is not possible. This may be the case when increasing the amount of outdoor air and/or filtration negatively impacts indoor temperature control or when outdoor air pollution is high.

Can current building ventilation and filtration systems be improved?

When used along with other protective measures, filtration can be part of a workplace COVID-19 exposure control plan to reduce the potential for inhalation of infectious aerosols.¹

If possible, improve the building HVAC system by increasing outside air and filtration. Consider using portable air cleaners in buildings that do not have HVAC systems or to supplement HVAC systems in buildings where adequate ventilation and filtration are difficult to achieve.

1. NIEHS. Jones et al. 2020. Strategies for Health Risk Reduction Strategies for Workplace, Schools, Homes, and Health Buildings Program.

1 VENTILATE WITH OUTDOOR AIR HVAC SYSTEM?

YES (Clean outdoor air) NO (Clean outdoor air)

2 INCREASE FILTER EFFICIENCY HVAC SYSTEM?

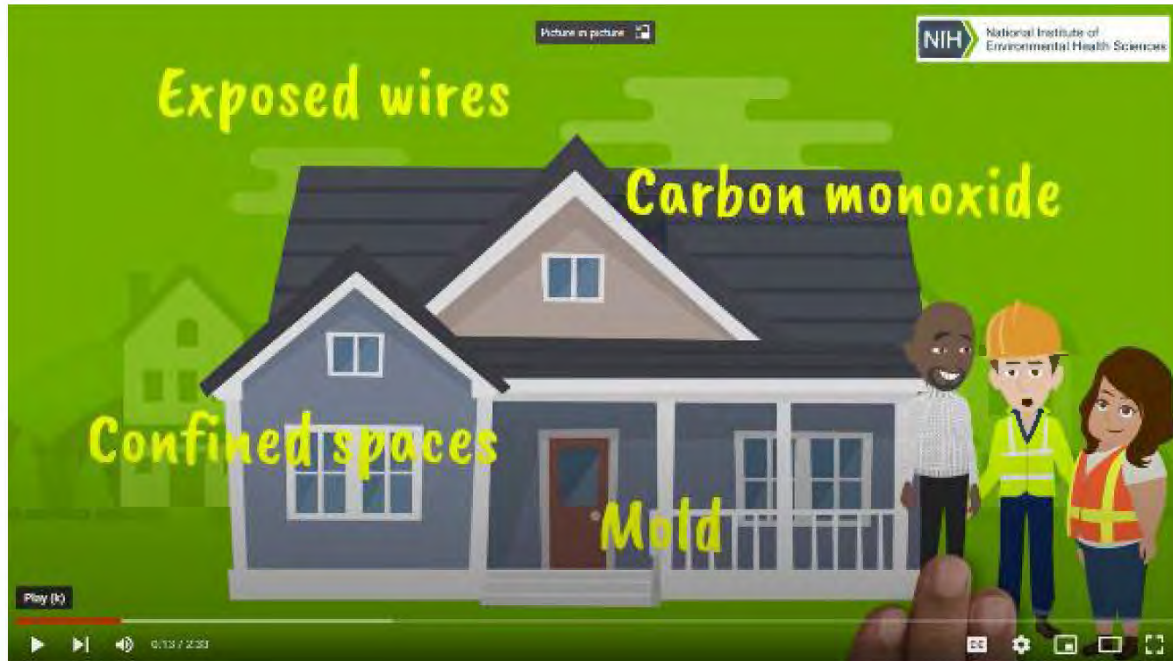
YES (Clean outdoor air) NO (Clean outdoor air)

3 SUPPLEMENT WITH PORTABLE AIR CLEANERS

Mitigation of the order in which the controls improvements to ventilation in buildings.

1. HVAC = heating, ventilation, and air conditioning. 2. Aerosols are defined as suspensions of solid or liquid particles in the air.

Promotional Video Showcases WTP Tools & Resources



A YouTube video promotes WTP disaster-specific tools and resources that are available. The video promotes resources on hurricanes, floods, mold, wildfires, and more.



Questions?

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