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Industrial Hygienist, WETB, NIEHS

NIEHS WORKER TRAINING PROGRAM - DEVELOPING EFFECTIVE HEALTH AND SAFETY TRAINING
Increasing worker safety and health across the country

Trained approximately 4 million workers since 1987

Helps businesses and municipalities meet worker training needs; helps keep worksites and communities safer

Increasing the country’s capacity for disaster preparedness and emergency response

Trained thousands of workers in response to many of the worst natural and manmade disasters in the U.S., including:
- World Trade Centers
- Hurricanes Katrina, Sandy, Harvey, Irma, Maria, and Florence
- Deepwater Horizon Gulf Oil Spill
- Ebola/Biosafety Response

Providing a job and life skills training program to unemployed and underemployed individuals

Reached over 12,000 individuals in 30 communities across U.S., with average job placement rate of 70%

Annual federal investment of $3.5M generates a $100M return
Worker Training Program: Protecting Communities through Hands-on Hazardous Material Training

• Safe workers, safe communities
  – Workers are certified and skilled to handle hazardous waste and chemical emergency response, e.g., chemicals, asbestos, lead, mold, and radiation
  – Training in every state and U.S. territory
  – Training is responsive to emerging threats and inclusive of diverse populations

• Curricula and resources available in a national Clearinghouse

• Currently 17 grantees for 5-year funding cycle, August 1, 2015 – July 31, 2020

Trainees in personal protective equipment in Sacramento, CA (Grantee: International Brotherhood of Teamsters)
WTP: Dynamic, Responsive Health and Safety Training

Core, fundamental topics

Disaster response & recovery

New hazards

Fentanyl (also known as fentanyl)
Hazardous Materials Worker Health and Safety Training (U45)

Includes three programs: Hazardous Waste Worker Training Program; HazMat Disaster Preparedness Training Program, and the Environmental Career Training Program

NIEHS/Department of Energy Nuclear Worker Training (UH4)

Focuses on training workers engaged in environmental restoration, waste treatment, and emergency response activities at sites in the U.S. DOE nuclear weapons complex

SBIR E-learning for HazMat (R43/R44)

Focuses on development of e-learning products that support health and safety training of hazardous materials workers, emergency responders, and skilled support personnel

Biosafety & Infectious Disease Response Training (UH4)
WTP Network: National Resource During Emergencies

• **Past Responses:** World Trade Center, Hurricanes Katrina and Rita, Super Storm Sandy, the Gulf Oil Spill, 2016 Louisiana Floods, and Far West Wildfires.

• **Flint, MI Response:** Four grantees implemented lead awareness and safety training for workers preparing to replace pipes and other construction and plumbing needs, workers and volunteers distributing water testing kits, and other exposed workers.

• **Local Emergencies, Local Impact:** A training recipient at Blount Hospital in Marysville, Tennessee, received training through University of Tennessee (UT) (part of the grantee Midwest Consortium) and stated:

   “The training provided through UT greatly enhanced my leadership ability during a recent train derailment and evacuation. Our facility decontaminated over 80 patients. No staff members were exposed to the chemical, and we were able to keep the contaminants outside our buildings.”
Hazardous Waste Worker Training Program (HWWTP)

• Since 1987, the NIEHS WTP has trained workers in every state and territory – a total of **3.1 million workers**

• Annually 110,000 to 172,000 workers trained since 2010

• In **2017**: 7,382 courses were held for 112,622 workers resulting in 1,057,864 contact hours of training

17 awardees/consortia supported by HWWTP
Wide Range of Employers Use WTP Training

*For example*

- Federal
- Large Businesses
- State, Local, and Tribal
- Small and Midsized Businesses
Mold Remediation and Awareness Training:

- Mold awareness training was conducted at 2 locations in Houston, Texas for residents in target communities.
- A total of 20 residents and leaders were selected for mold awareness—train-the-trainer—work consisting of these modules: (1) Mold Awareness Training; and (2) Introduction to and Use of Moisture Meters.
- A total of four (4) training workshops were held, two in Pleasantville and two in the Fifth Ward.
- A total of twenty (20) moisture meters were purchased and given to two Community-Based Organizations selected for this project: Achieving Community Tasks Successfully (ACT) and Coalition of Community Organizations (CCO).
- Each CBO also received a re-grant of $10,000 for “mucking and gutting,” sheetrock and sheetrock installation supplies, and construction costs.
Mold and health classes help Hurricane Florence workers and residents

In March, NIEHS Worker Training Program (WTP) grantees the International Chemical Workers Union Council (ICWUC) delivered mold remediation training in Robeson County, North Carolina. The training built on a partnership between ICWUC and the Robeson County Disaster Recovery Committee (RCDRC) that was established as part of Hurricane Matthew recovery efforts in 2016.

In September 2018, Hurricane Florence dumped more than two feet of rain on eastern North Carolina. In the record-breaking floods that followed, surging water from the Lumber River destroyed many homes and businesses in Robeson County. Months later, residents still face extensive cleanup, especially of mold.

Disaster recovery training

WTP has a long history of disaster recovery training after hurricanes and floods. The program offers educational and training resources for workers, homeowners, and community members.

- Training resources on hurricane and flood recovery
- Training resources for responder and community resilience

WTP also has pocket-sized booklets that include information on mold cleanup and hurricane safety and health. These booklets are available in English and Spanish, and can be ordered through an online order form at no cost.

WTP Training Resources

Ebola Awareness Orientation
Health and Safety Essentials for Workers

National Institute of Environmental Health Sciences
Worker Training Program

Flood Response Orientation
Safety Awareness for Responders to Floods: Protecting Yourself While Helping Others

NIH National Institute of Environmental Health Sciences
Worker Training Program

Providing Worker Health and Safety Training to Prepare for and Respond to Disasters

WTP’s National Emergency Training Resource Center coordinates a wide range of training exercises and courses, including: First Responder, Firefighter, Healthcare, and Emergency Management. These courses are designed to provide training in response to disasters and emergencies.

A Track Record of Responses
WTP’s National Emergency Training Resource Center coordinates a wide range of training exercises and courses, including: First Responder, Firefighter, Healthcare, and Emergency Management. These courses are designed to provide training in response to disasters and emergencies.

Training Tools and Resources
- Firefighter
- Chemical accidents
- Debris removal
- Bureau of Alcohol, Tobacco, Firearms and Explosives
- National Institute of Environmental Health Sciences

For more information, contact the National Emergency Training Resource Center at 301-594-9930 or n3tctr@nih.gov.
Building Capacity with Native Americans and Alaska Natives


Grantees delivering training include:
- Alabama Fire College Workplace Safety Training
- International Union of Operating Engineers National Training Fund
- Midwest Consortium
- Steelworkers Charitable and Educational Organization Tony Mazzocchi Center
- Western Region Universities Consortium
More Than 20 Types of Courses were Offered to Tribal Workers

Courses included:

- Basic Superfund Site Worker and Site Worker Refresher
- Clandestine Methamphetamine (Meth) Lab Awareness
- Emergency Response and Preparedness
- General Construction Safety
- Hazard Communication
- Hazardous Materials (HazMat) Transportation
- Hazardous Waste Operations
- HazMat Air Monitoring
- Mass Casualty Incident Triage
- Process Safety Management
- Radiation and Nuclear Awareness
- Training Methods/Trainer Development
Zip Codes in Alaska Represented by Alaska Native Trainees of the NIEHS WTP (2015 – 2017 Program Years)
# Report Highlights: Hazardous Waste, Disaster Preparedness, and Job Training Across the Country

<table>
<thead>
<tr>
<th>Training for</th>
<th>By Grantee</th>
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<tbody>
<tr>
<td>Nationwide, including summaries of work in AL, NM, NY, MS, and MT</td>
<td>Alabama Fire College Workplace Safety Training</td>
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<tr>
<td>Alaska Natives</td>
<td>University of Washington, through Western Region Universities Consortium</td>
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<tr>
<td>Bureau of Indian Affairs and tribes in AZ and NM</td>
<td>Arizona State University, through Western Region Universities Consortium</td>
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<tr>
<td>Three Affiliated Tribes in North Dakota</td>
<td>Three Affiliated Tribes, through Midwest Consortium</td>
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<tr>
<td>Spokane Indian Tribe in Washington</td>
<td>International Union of Operating Engineers National Training Fund, through CPWR</td>
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<tr>
<td>Yakama Nation in Washington</td>
<td>Steelworkers Charitable and Educational Organization Tony Mazzocchi Center</td>
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WTP Creates New Job Opportunities: Environmental Career Worker Training Program (ECWTP)

Job and life skills training program: For unemployed and underemployed individuals

Success: Since beginning of program (FY95), over 12,000 workers have been trained with an average 70% employment rate. For 2018, average employment increased to 74% with 77% for 2019.

Economic Impact Analysis: $100 million return on $3.5 million investment.
- Increases probability of employment by about 59%.

Local Programs: E.g. Training in East Palo Alto, CA; New Orleans, LA; St. Paul, MN; and Flint, MI (CPWR)
- 2018: Graduated 84 out of 86 trainees: 75 are employed at 87% job placement with average wage of $19.02.
ECWTP Awardees

- **Center for Construction Research and Training**
  - New Orleans, LA; St. Paul, MN; East Palo Alto, CA and Flint MI.

- **OAI**
  - Chicago, IL; Dallas, TX; Kansas City KS/MO.

- **University of California, Los Angeles**
  - Los Angeles, CA; Seattle, WA; and Portland, OR

- **Rutgers School of Public Health-NJ/NY Consortium**
  - Newark, NJ and New York City, NY

- **TSU/DSCEJ- HBCU Consortium**
  - New Orleans, LA; Pensacola, FL; Houston, TX; and Detroit, MI.

- **United Steelworkers**
  - New York City, NJ
Overview of Reports and Findings

- Benefits
  - Higher earnings
  - Fewer workplace injuries
  - Lower hiring costs
  - Reduced crime related costs
  - Improved government fiscal budget
  - Environmental benefits
  - In-kind donations
# NIEHS Environmental Career Worker Training Program

## NIEHS Environmental Career Worker Training Program Update

For 09/01/1996-10/31/2019 Draft Final

<table>
<thead>
<tr>
<th>Year</th>
<th>Students Trained</th>
<th>Placed in Jobs</th>
<th>Percentage of Students Placed in Jobs</th>
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<td>2019</td>
<td>644</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>12,565</strong></td>
<td><strong>8,854</strong></td>
<td><strong>70%</strong></td>
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WORKER PROTECTION FROM WILDFIRe SMOKE
Emergency Cal/OSHA Standard 2019

California's recent wildfire seasons have confirmed times of presenting the conditions that have become a year-round threat. Increasingly, workers in the path of wildfires smoke have been the focus of concern given the health impacts of exposure. In December 2018, worker advocates in the state urged the California Division of Occupation Safety and Health (Cal/OSHA) to take measures to address this growing worker health threat.

The Cal/OSHA Standards Board voted to adopt an emergency temporary standard to protect workers from exposure to wildfire smoke. The temporary standard went into effect on July 25, 2019, and will remain effective for up to one year. Cal/OSHA is now developing a permanent standard.

HOW DOES WILDFIRe SMOKE AFFECT HEALTH?

Wildfire smoke includes ash and tiny particles that can travel through these over long distances. These particles are made up of whatever is being burned— not only plants and vegetation, but also remnants of residential or commercial structures, vehicles, industrial or household chemicals, and other unknown materials. Many of these particles are invisible to the naked eye.

Individuals may experience health symptoms if they breathe in these smoke particles. These symptoms can include:

- Irritation of the eyes, nose, and throat
- Difficulty breathing
- Asthma attacks
- Chest pain
- Persistent cough, phlegm, and wheezing

Particulate matter can also cause more serious longer term health problems, such as reduced lung function, chronic bronchitis, worsening of asthma, heart failure, and early death.

Adults over 65 years of age, children, and individuals with pre-existing health conditions are at higher risk for smoke-related health problems.

DEFINITIONS:

- AQI: Air Quality Index. An index that indicates air pollution and associated health concerns
- Real-time AQI for any location in the U.S. is available at www.airnow.gov
- PM2.5: Particles (or “particulate matter”) with a diameter of 2.5 micrometers or less—about 3% the thickness of a strand of human hair. The small size of PM2.5 particles allows them to reach deep into the lungs and even enter the bloodstream.

WHEN ARE EMPLOYERS REQUIRED TO ACT?
The emergency standard is triggered when the AQI (air quality index) for PM2.5 at the worksite exceeds 150. An AQI above 150 indicates that the air is “unhealthy” to “hazardous.”

WHAT PROTECTIONS DOES THE EMERGENCY STANDARD PROVIDE?

- Communicate with workers about current AQI, PM2.5 at the worksite and the potential symptoms of wildfire smoke exposure
- Provide training on the health effects of wildfire smoke, protections available to them, and procedures for obtaining medical treatment
- Reduce workers’ exposure to wildfire smoke by providing enclosed building or vehicles with filtered air, relocating work where the AQI or PM2.5 is lower than 151, changing work schedules, lessening work intensity, and/or accommodating workers’ requests
- Provide respirators (N95 or approved N95 filtering face piece respirators) and encourage their voluntary use

WHO DOES THE EMERGENCY STANDARD APPLY TO?
The emergency standard applies to both outdoor and indoor workers who may be exposed to wildfire smoke for more than one hour per day, even if they are not directly impacted by fires.

NEXT STEPS

- Cal/OSHA is working to develop a permanent standard to protect outdoor workers from wildfire smoke.

To download this and other LOSH fact sheets, visit losh.ucla.edu.

Produced by the UCLA Labor Occupational Safety and Health Program (LOSH) under a grant from the National Institute for Environmental Health Sciences (NIH-NIH grant P30 ES000020). California 2019.
Bilingual Wildfire Training- October 23, 2019 – Pasadena Job Center

WHEN ARE EMPLOYERS REQUIRED TO ACT?
The emergency standard is triggered when the AQI (air quality index) for PM2.5 at the worksite exceeds 150. An AQI above 150 indicates that the air is "unhealthy" to breathe. Employers must monitor air quality using publicly accessible forecasts of AQI for PM2.5 or by directly measuring PM2.5 levels at the worksite.

WHAT PROTECTIONS DOES THE EMERGENCY STANDARD PROVIDE?
When the AQI for PM2.5 exceeds 150, employers are required to:
- Communicate with workers about current AQI PM2.5 at the worksite and the potential symptoms of wildfire smoke exposure
- Provide training on the health effects of wildfire smoke, protections available to them, and procedures for obtaining medical treatment
- Reduce workers' exposure to wildfire smoke by providing enclosed building or vehicles with filtered air, relocating work where the AQI or PM2.5 is lower than 151, changing work schedules, lessening work intensity, and/or accommodating longer rest breaks
- Provide respirators (NIOSH-approved N95 filtering face piece respirators) and encourage their voluntary use
- As currently written, the emergency standard requires respirator use along with mandatory fit testing for workers if the AQI for PM2.5 exceeds 500

WHO DOES THE EMERGENCY STANDARD APPLY TO?
The emergency standard applies to both outdoor and indoor workers who may be exposed to wildfire smoke for more than one hour per day, even if they are not directly impacted by fires. This may include:
- Construction Workers
- Agricultural Workers
- Utility Workers
- Landscapers and Gardeners
- Day Laborers and Domestic Workers
DOE/NIEHS Worker Training Program:

- NATIONAL DEFENSE AUTHORIZATION ACT: Section 3131 created the Worker Training Program in 1993 for NIEHS and DOE as a partnership.
- Interagency Agreement with DOE to develop model worker safety and health training programs at DOE facilities.
- Support worker safety training for the purpose of DOE site clean up activities, waste management and hazardous materials response.
What Is the Goal of the Program?

• To provide safety and health training that is both site specific and trade-specific in view of the fact that DOE sites are complicated, featuring a combination of nuclear, industrial, demolition, and construction activities

• To ensure that DOE site workers are prepared to work safely in hazardous environments

• To provide workers with sufficient knowledge to identify hazardous situations and to take appropriate actions to protect themselves, fellow workers, and the environment.
MANY RESOURCES!
• NIEHS Minimum Criteria (Appendix E of 1910.120)
• Contact information for non-profit training providers
• Curricula Catalog for hundreds of courses
• Weekly E-Newsbrief
• Calendar of Important Conferences and Events
• Special Reports and Additional Resources
• Links to OSHA and those other agencies
• NIEHS Worker Training Program

• NIEHS NATIONAL CLEARINGHOUSE

• Hurricanes, Floods and Mold Resources
  – Mold Booklets are available in English and Spanish, and can be ordered through an online order form at no cost - https://tools.niehs.nih.gov/wetp/booklets/index.cfm

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Thank you

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