



WTP Grant Recipient Meeting

October 17, 2023

NIEHS

Rodbell Auditorium





NIEHS Worker Training Program Update

Sharon Beard, MS

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Worker Training Program

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Topics:

- General Overview of Training Numbers
- Concept Clearance Approval
- Spring Meeting – Looking at Anchorage Alaska in April or May 2023
- DOE Engagement Activities
 - HAMMER Meetings
 - Collaboration and Site Support
 - Labor Training Working Group Update
 - DOE Annual Report – Gary Johnson

WTP: Preparing Workers for Hazardous Materials and Emergency Response since 1987

Increasing **worker safety and health** across the country.

Trained approximately **4 million workers** since 1987

Helps businesses and municipalities meet worker training needs and 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 U.S. natural and man-made disasters** including:

- World Trade Centers
- Hurricanes Katrina, Sandy, Harvey, Irma, and Maria
- Deepwater Horizon Gulf Oil Spill
- Ebola/Biosafety Response
- 2022 Disaster Supplements

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

Reached over 14,500 individuals in 30 communities across the U.S., with an **average job placement rate of 72%**.

Annual federal investment of **\$3.5 million generates a \$100 million return**



Concept Renewal for: Worker Training Program

**Hazardous Materials Worker Health and Safety Training-U45
HAZMAT Training at DOE Nuclear Weapons Complex –UH4
NIEHS WTP SBIR E-Learning for Hazmat –R43/R44**

**Sharon Beard, Director
Jim Remington, Program Analyst
Eric Persaud, Health Specialist
Gary Johnson, Industrial Hygienist
Kathy Ahlmark, Health Specialist**

**National Advisory Environmental Health Sciences Council (NAEHSC) Meeting September 13,
2023**

<https://www.niehs.nih.gov/news/video/naehsc/index.cfm?video=962334&ordinal=4>

WTP: Funding Mechanisms & Program Areas

U45

Cooperative Agreements



Hazardous Waste Worker Training Program
“REQUIRED”



HAZMAT Disaster Preparedness Training Program
“OPTIONAL”



Environmental Career Worker Training Program
“OPTIONAL”

UH4

Cooperative Agreements



NIEHS/U.S. DOE Nuclear Worker Training Program

R43/44

SBIR Grants



Small Business Innovative Research (SBIR) E-Learning for HAZMAT

WTP Next Steps to Expand Priorities

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



DOE Meetings – SAVE THE DATES

HAMMER Steering Committee and Medical Surveillance Subcommittee Meetings

HAMMER Facility, Hanford Site

Date: October 25-26, 2023

Training EFCOG Annual Meeting

Location: Hanford Site (sponsors are HAMMER and PNNL)

Date: March 18th – 22nd, 2024 (Monday and Friday Travel Days)

A Training EFCOG meeting survey seeking recommendations and ideas is out for action NOW. Please consider providing your input:

https://nnssmsts.gov1.qualtrics.com/jfe/form/SV_0lk6bjrfmzVIFka

Recent DOE Grantee Activities

- LANL Institutional Training Support continues to expand due to new hires/advancements (CPWR, IBT, PETE)
- N3B LANL EM contractor support initiated by CPWR. Potential expansion beyond HAZWOPER is being worked
- IBT is working with HAMMER to add Warehouse Worker Chemical training and load securement courses
- USW delivered two RCT Academic courses to DOE Federal and contractor staff
- Working with the LANL Plutonium Project to potentially delivery WTP safety and health training (new relationship)
- Working with NTC and CPWR to expand course deliveries to support the Federal technical qualification program
- Development of cross-walk between WTP Criteria Document and DOE Std 1070 being worked



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

Worker Training Program Department of Energy (DOE) 2023 Fall Workshop Update

**Gary Johnson, Jr., MPA
Worker Training Program
Industrial Hygienist**

NIEHS/U.S. DOE Nuclear Worker Training Program

Delivers training for workers engaged in environmental restoration, waste treatment, and emergency response activities at sites in the U.S. Department of Energy (DOE) nuclear weapons complex.

The training offered under the NIEHS/DOE Program supports and integrates with DOE's Integrated Safety Management and DOE safety culture; Title 10 CFR 851; Worker Safety and Health Program; other initiatives.



NIEHS/DOE Nuclear Worker Training Program:
niehs.nih.gov/careers/hazmat/training_program_areas/doe/index.cfm

NUCLEAR WORKER TRAINING PROGRAM 2023 Update

- Training is available to all DOE workers at former government weapons sites and nuclear research facilities (Union/Non-Union)
- All training is completed following the WTP Minimum Training Criteria for [HAZWOPER](#) training
- Reciprocity has been agreed upon for non-site-specific training between some sites; saving time and money while providing needed jobs.
- WTP grantees collaborated with the DOE Energy Facility Contractors Group (EFCOG) and the National Training Center (NTC) to establish a Training Reciprocity Program an initiative to minimize duplicative training, improve uniformity in CORE training content, and maintain communications amongst site contractors.



Program Training Data, 2021-2022

Training Summary

For the 2021-2022 program year (Aug. 1, 2021 – Jul. 31, 2022):



26,163

Workers trained



1,890

Courses provided



327,619

Contact hours delivered



\$9,393,463

Dollars awarded



\$28.67

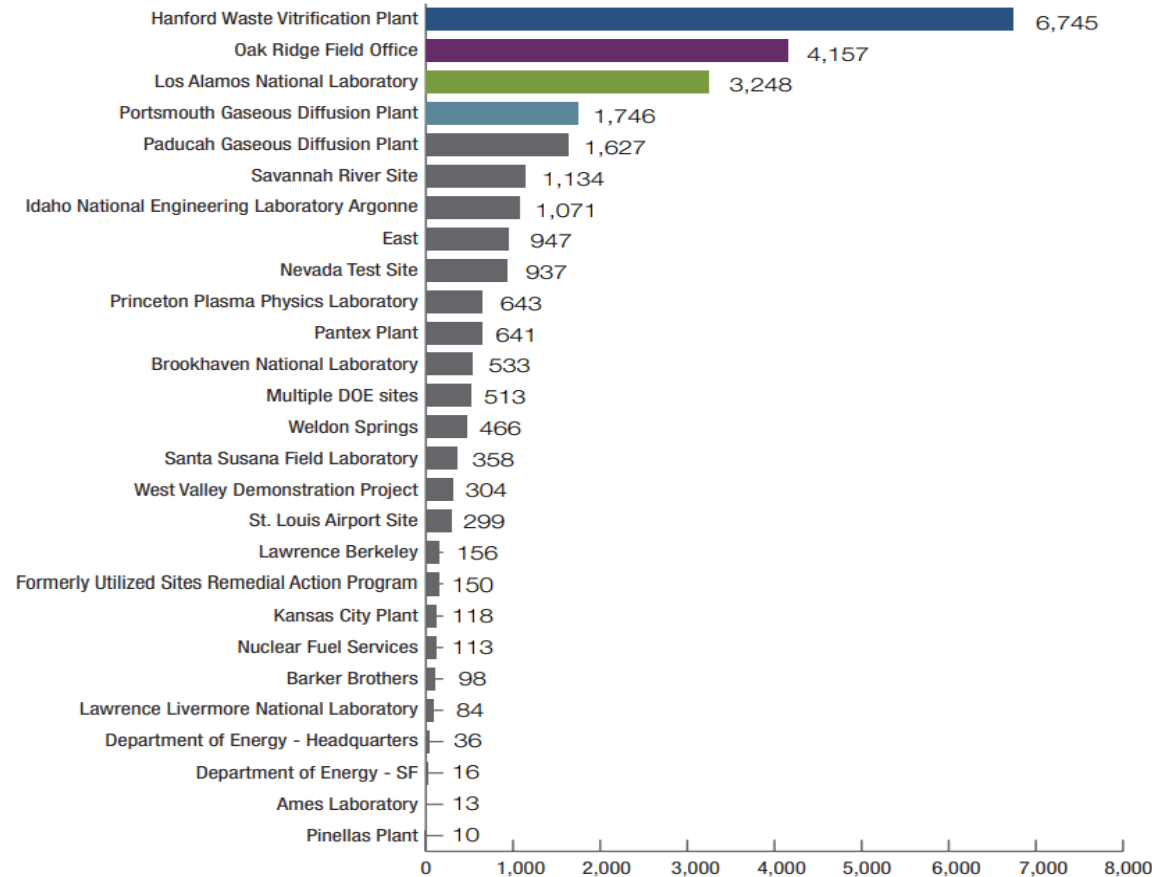
Average cost per contact hour

Although slightly fewer courses were provided in FY 2022 (-1% change), total hours trained increased by 17% and total workers trained increased by 13%.

NUMBERS OF WORKERS TRAINED AND WHERE THEY TRAINED

The figure below shows sites with the highest numbers of workers trained.

The **Hanford Site** had the highest number of workers trained, followed by **Oak Ridge**, **Los Alamos**, and **Portsmouth Gaseous Diffusion Plant**. Overall, grantees trained at or around 27* sites this year. (Aug. 1, 2021 – Jul. 31, 2022)



* The 27 sites includes "multiple sites" which includes sites in Arizona, California, District of Columbia, Georgia, Illinois, Maryland, Michigan, Missouri, Ohio, Pennsylvania, Texas, Virginia and Washington.

DOE Training Highlight: The Center for Construction Research and Training

CPWR - The Center for Construction Research and Training

Construction is one of the most dangerous industries in the US, with over 1,000 fatal injuries each year since 2016. About two-thirds of those injuries were caused by the [Construction Focus Four](#) hazards, including fall to lower level, struck-by, electrocution, and caught-in/between. The March 2023 issue of CPWR's [Data Bulletin](#) examined fatal and nonfatal Focus Four injuries in construction by injury type and detailed event/exposure. It found that falls to a lower level accounted for a majority of fatal Focus Four injuries, while struck-by injuries comprised a majority of nonfatal Focus Four injuries. In response to these ongoing injuries and fatalities, CPWR's training courses incorporate discussions and activities to help students better recognize these hazards and discuss ways to protect themselves on the jobsite. While many students who take Hazardous Waste training think that hazardous waste is the greatest hazard, the data show the more common worksite hazards such as falls to lower level, struck-by, electrocution, and caught-in/between lead to more injuries and fatalities.



Jim Remington

Program Analyst

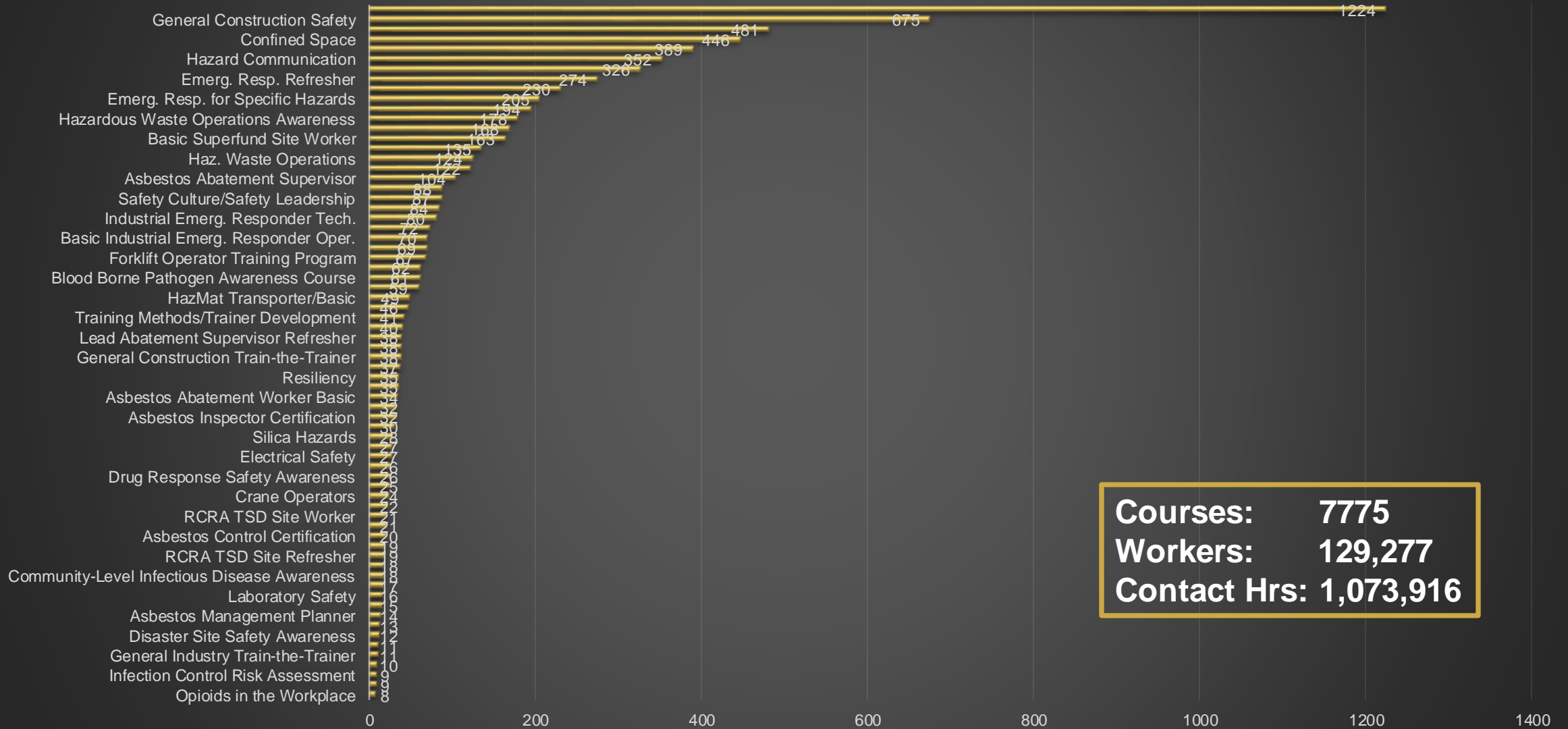
Worker Training Program

Division of Extramural Research & Training

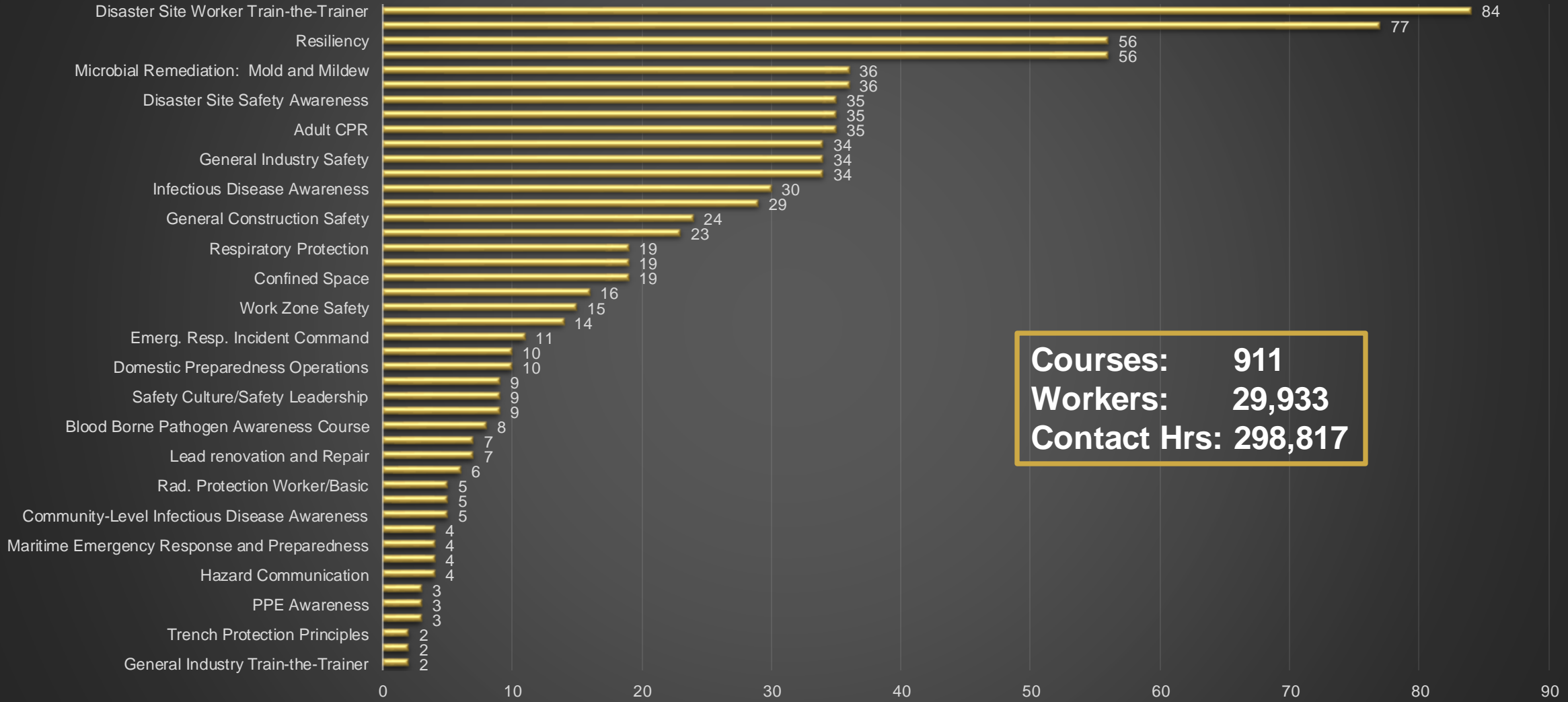
National Institute of Environmental Health Sciences



2023 HWWT Courses



2023 HDPTP Courses



Courses: 911
Workers: 29,933
Contact Hrs: 298,817

Hazmat Disaster Training Program

- Disasters of Interest
 - East Palestine Train Derailment
 - Lahaina Maui Wildfire
 - West Coast hurricane
 - Severe weather, Floods, Tornados, Wildfire
 - Emerging Threats
 - Mental health/Resilience training



All-Hazards Planning



Hazards common to incident type scenarios:

- Fatigue
- Driving
- Slip, trips, falls
- PPE
- Equipment
- Energizing
- Mitigating chemicals
- Communications
- Environmental extremes
- Physical and mental health



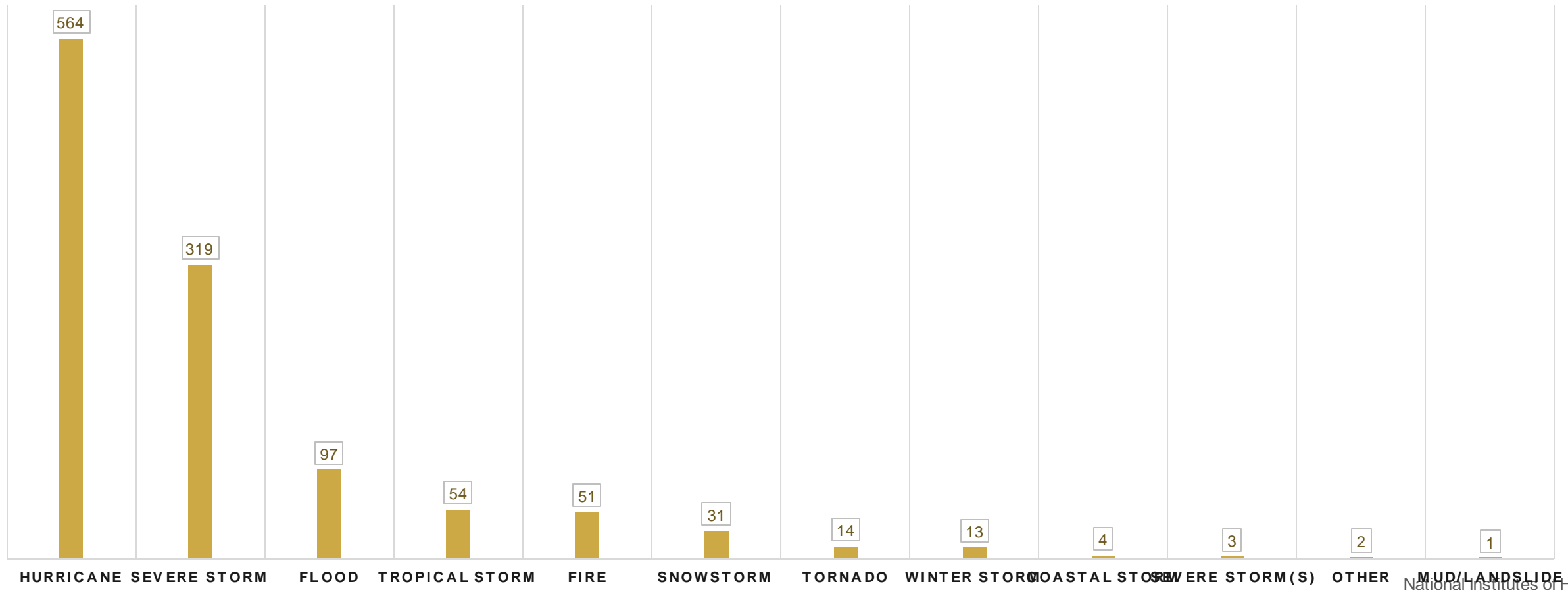
Consolidation Appropriation Act, 2023

NATIONAL INSTITUTES OF HEALTH NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

For an additional amount for “National Institute of Environmental Health Sciences”, \$2,500,000, to remain available until expended, for necessary expenses in carrying out activities set forth in section 311(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9660(a)) and section 126(g) of the Superfund Amendments and Reauthorization Act of 1986 related to the consequences of major disasters declared pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 3 5121 et seq.) in 2022.

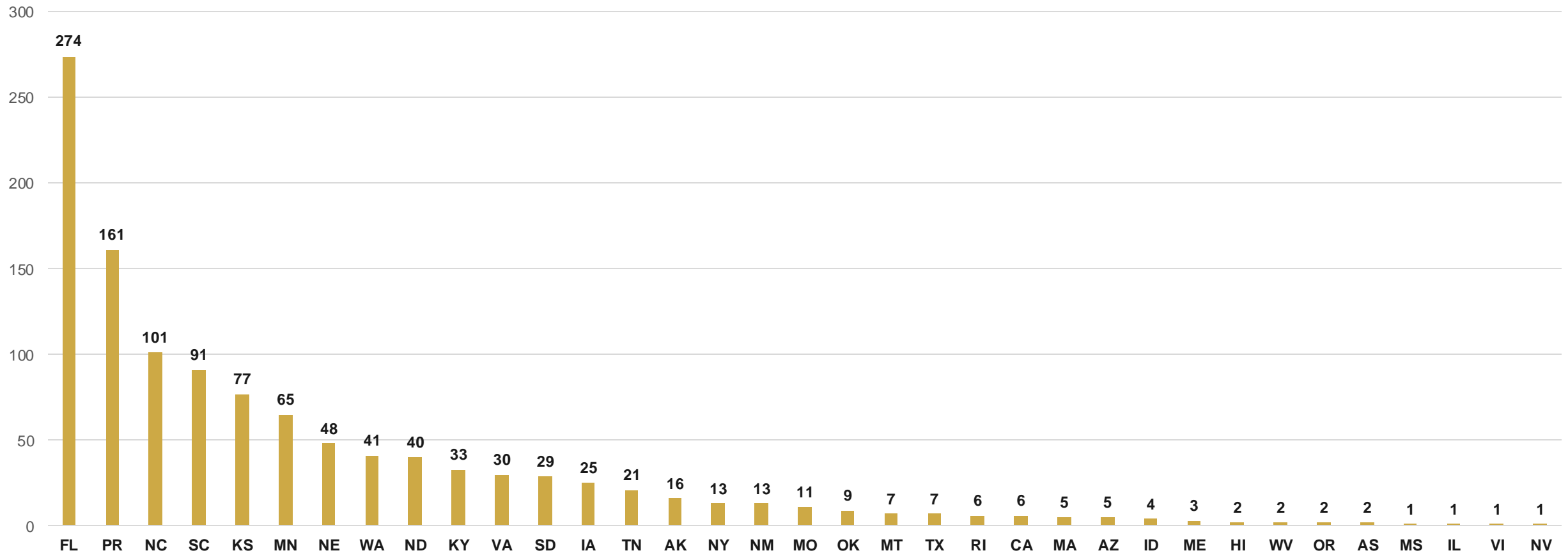
Declared Disasters by Type

COUNT OF INCIDENT TYPE 2022



2022 Declared Disasters by State

Count of State 2022



Applications funded:

Consortium	Activity	Locations
Sustainable Workplace Alliance	The Sustainable Workplace Alliance will conduct training for workers and volunteers involved in response and recovery efforts after a declared disaster. The training would ensure workers are aware of physical and health hazards and mitigation techniques prior to and during response activities. Those workers and community volunteers trained would understand potential health hazards encountered during remediation work after a disaster including mold, lead paint and asbestos exposure.	PR, FL
INTERNATIONAL CHEMICAL WORKERS UNION	The center proposes awareness classes with the subject matter regarding either bloodborne pathogens, first aid, CPR, AED, resiliency, or a mold combination awareness and conducted in either a bilingual or Spanish language. Bring participants from declared disaster areas to the training so that they can share their experiences and strategies with one another about their recovery.	NC, TN, WA, NM
NATIONAL PARTNERSHIP/ENVIRON MNTL/TECH/ED	PETE's partnership with PathStone Corporation, Puerto Rico, with outreach and training in Disaster Preparation and Response throughout Puerto Rico. PathStone has potential to reach all generations of workers from seniors to youth, farmers and ranchers, and other community members on the island.	PR

Applications funded:

UNIVERSITY OF MINNESOTA	<p>Three Affiliated Tribes in North Dakota, the University of Illinois, the University of Minnesota, the University of Tennessee, and YouthBuild Louisville in Kentucky. Training delivery with developed curricula to support disaster preparedness, response, and recovery training will lead to emergency responders, government workers, community members, and others to be better prepared for future storms and other disasters.</p>	<p>ND, IL, MN, TN, KY</p>
UNIVERSITY OF CALIFORNIA LOS ANGELES	<p>WRUC will partner with the Northwest Tribal Emergency Management Council (NWTEMC), the National Day Laborer Organizing Network (NDLON), and several California-based organizations to extend needed training resources to these impacted communities and worker populations.</p>	<p>WA, CA</p>
RUTGERS BIOMEDICAL AND HEALTH SCIENCES	<p>The Atlantic Center for Occupational health and Safety Training (Atlantic COHST) will provide essential training and outreach in response in Puerto Rico to address health and safety training needs of worker populations in Puerto Rico, including communities, volunteers, day laborers, migrant, and other vulnerable worker populations</p>	<p>PR</p>

Applications funded:

<p>INTERNATIONAL ASSOCIATION of FIRE FIGHTERS</p>	<p>Providing Confined Space Rescue and Technician training to vulnerable worker populations, including firefighters to underserved areas within states that had a major disaster in 2022</p>	<p>VA, AK, MA</p>
<p>UNIVERSITY OF MASSACHUSETTS LOWELL</p>	<p>TNEC-CSEA's proposes: 1) a partnership with the Lowell Community Health Center in Lowell, MA, to train community health workers and community residents on Disaster Preparedness, Infectious Disease Awareness, and CPR/First Aid; 2) a partnership with the Coalition for a Better Acre in Lowell, MA, to support and expand their disaster preparedness and infectious disease training programs for community members, non-profit workers, and CBA's staff; 3) an expansion of MassCOSH's partnership with the Massachusetts Association of Community Health Workers to provide training and support on disaster preparedness, and continue and expand MassCOSH's disaster preparedness related training, through community partners, for a variety of vulnerable workers throughout Massachusetts; and 4) conduct 4-hour Disaster Preparedness courses, as well as 8-hour Disaster Preparedness and 15-hour Disaster Site Worker in-person courses, all for community, environmental justice, and volunteer organizations in Massachusetts and Rhode Island.</p>	<p>MA, RI</p>
<p>DEEP SOUTH CENTER FOR ENVIRONMENTAL JUSTICE, INC.</p>	<p>Providing additional training courses as outlined in this application, reaching communities in Pensacola, FL. Continue its work with the consortium member, Unity and the Family Ministries (UFM) to conduct disaster preparedness education and training</p>	<p>FL</p>



National Institute of
Environmental Health Sciences
Worker Training Program



SUPPLEMENT KICKOFF MEETING:
Promoting Health, Safety, and Recovery
Training Following Declared Disasters in 2022

SEPTEMBER 28-29, 2023 // San Juan, PR

Grantee and Partner Communication and Collaboration

- Share program plan
- Identify needs and gaps
- Potential partners
- Relationship building
- Grantee reporting requirements
- Clearinghouse resources and activities
- Network, Network, Network

Building a Community of Practice



Teamster training session at the 2023 WTP National Trainers' Exchange.

Eric Persaud, DrPH, Health Specialist

Overview

- Building Structure
- Community of Practice
- Discussion on Next Steps



Trainer Bruce McClue (far right) with WTP grantee the Historically Black Colleges and Universities Consortium pictured sharing health and safety resources with a resident following Hurricane Ida in Louisiana.

Protecting Workers is a Core Value

NIEHS WTP grantees have responded to disasters for decades. In Rosen et. al. (2023) *Responding to Disasters: Training Can Overcome Issues in Disaster Response*, there were some key steps to protecting workers:

- Training on a routine basis prior to an event
- Site-specific training
- Filling communication gaps
- Fostering critical community partnerships
- Take a preventive approach



Photo by Atlantic Center

Evaluation Resources through NIEHS Worker Training Program

NIEHS WTP provides resources for grantees and the broader occupational health and safety training community to develop and implement evaluation practices.

Evaluation Community of Practice: Community to share methods & lessons learned
<https://tools.niehs.nih.gov/wetp/index.cfm?id=2585>

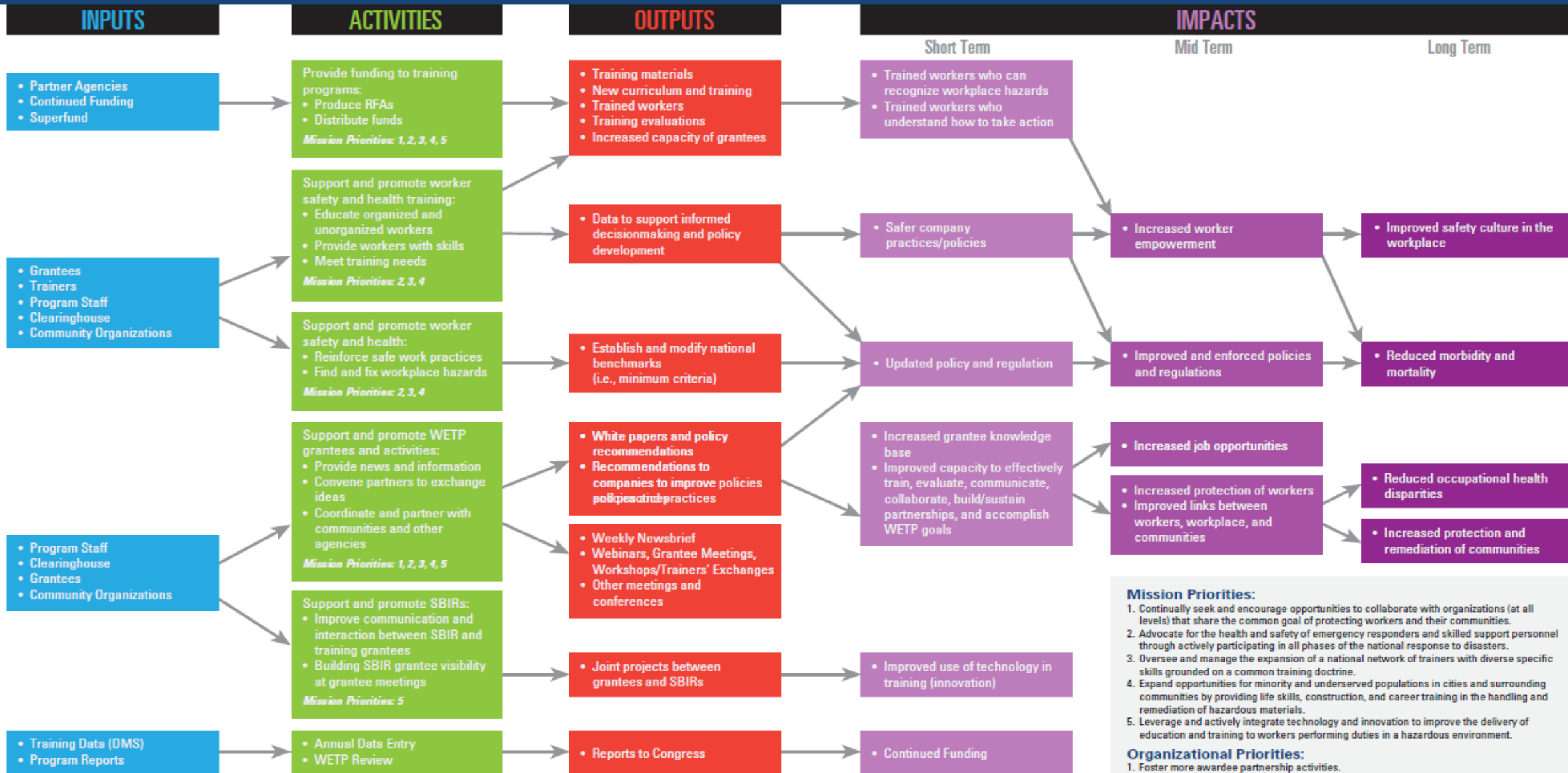
COVID-19 Tip sheet with suggestions and resources:
https://tools.niehs.nih.gov/wetp/public/hasl_get_blob.cfm?ID=11961

Technology Tips for Virtual Meetings and Interactive Online Sessions:
https://tools.niehs.nih.gov/wetp/public/hasl_get_blob.cfm?ID=11941

WETP Logic Model: https://tools.niehs.nih.gov/wetp/1/12FallMeeting/wetp_logic_model.pdf

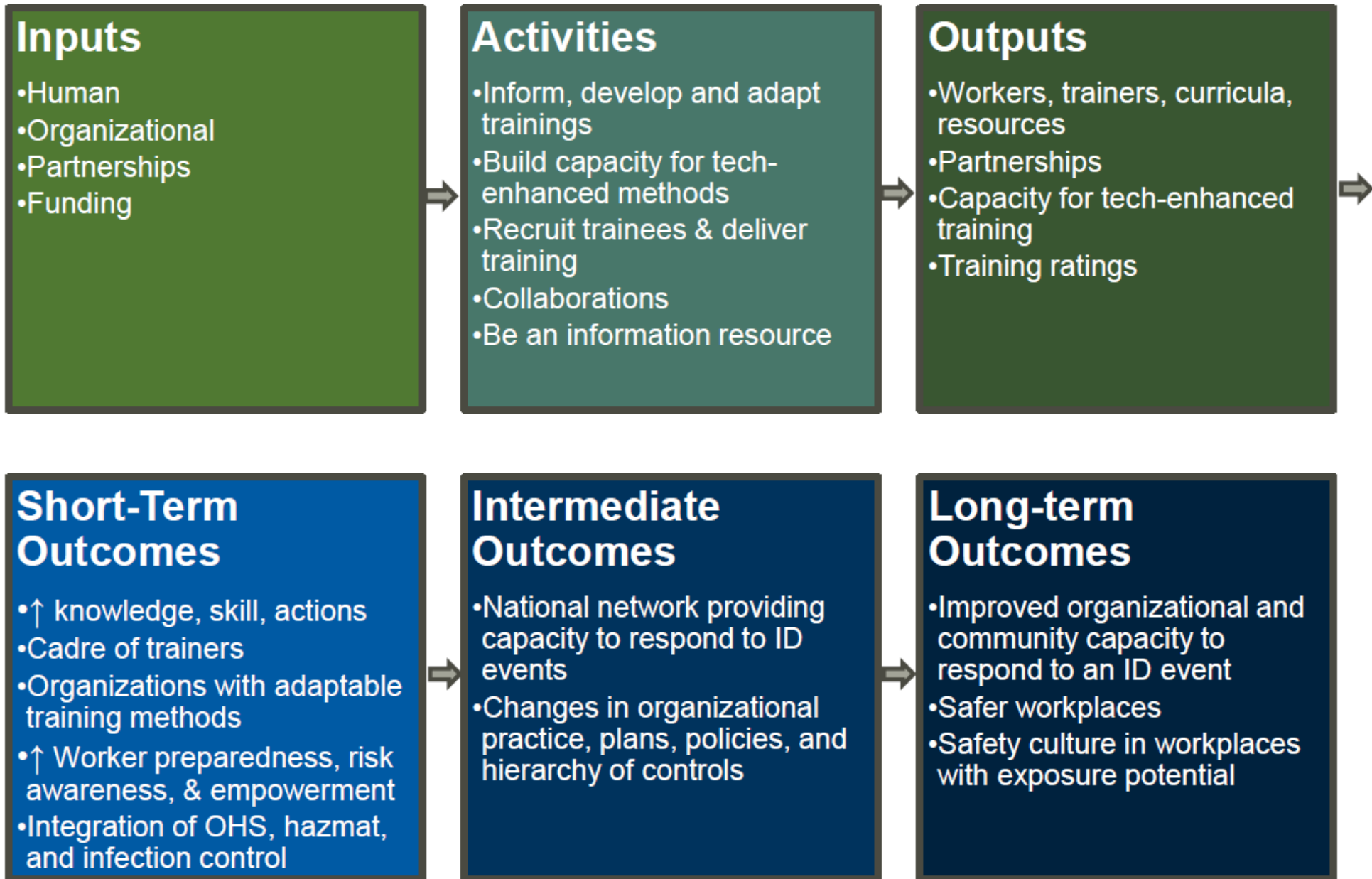
Minimum Criteria:
https://tools.niehs.nih.gov/wetp/public/hasl_get_blob.cfm?ID=11266&file_name=WTP_Minimum_Criteria_062818_Final_508.pdf

Worker Education and Training Program (WETP) Logic Model



- Mission Priorities:**
- Continually seek and encourage opportunities to collaborate with organizations (at all levels) that share the common goal of protecting workers and their communities.
 - Advocate for the health and safety of emergency responders and skilled support personnel through actively participating in all phases of the national response to disasters.
 - Oversee and manage the expansion of a national network of trainers with diverse specific skills grounded on a common training doctrine.
 - Expand opportunities for minority and underserved populations in cities and surrounding communities by providing life skills, construction, and career training in the handling and remediation of hazardous materials.
 - Leverage and actively integrate technology and innovation to improve the delivery of education and training to workers performing duties in a hazardous environment.
- Organizational Priorities:**
- Foster more awardee partnership activities.
 - Institutionalize the WETP in awardee organizations by capturing program history and maintaining strong leadership development programs.

Simplified WTP COVID-19 Logic Model



Common Metrics and Strategies

- a. The training has prepared me to recognize hazards on the job
(Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree)
- b. The training has increased my knowledge of how to control workplace hazards
(Strongly Disagree – Disagree – Neutral – Agree – Strongly Agree)
- c. Since the training course, how have you applied this training at work or in the community?



Photo by WRUC: NDLON Disaster preparedness and response training for day laborers in Santa Cruz

Stakeholder Engagement of ECWTP

- Engage ECWTP grantees and stakeholders
- Discuss evaluation of benefits and impacts
- Learn best practices and gain new ideas
- An opportunity for stakeholder engagement

Environmental Career Worker Training Program
Impacts of pre-employment and health and safety training for underserved communities

COMPONENTS

- JOB TRAINING/TECHNICAL SKILLS**
Construction and Remediation
- LIFE SKILLS**
Communication and Time Management
- KNOWLEDGE/AWARENESS**
Environmental Justice and Worker Safety and Health

IMPACTS

- INDIVIDUAL/INTERPERSONAL GROWTH
- SAFER WORKPLACE
- WE'RE HIRING
- POLICY IMPACTS
- PERFECT PRACTICES
- STANDARDS
- REGULATIONS
- COMPLIANCE
- SUSTAINABLE COMMUNITIES

NIH National Institute of Environmental Health Sciences
Worker Training Program

ECWTP SELECTED AS PARTICIPANT IN THE JUSTICE40 INITIATIVE

Learn about Justice40 and the NIEHS Environmental Career Worker Training Program.



Photo from WTP grantee the Western Region Universities Consortium and their partner, Zender Environmental, leverage a partnership with the Backhaul Alaska program.

Thank You!



Photo from Moderate Risk HAZWOPER training that PETE conducted for Pathstone trainers at Juncos Training Center

Future Directions

Interest in evaluation community of practice

Request for contact lists

Topics of immediate need

General comments

If you have any questions or comments we do not address during the presentation and want to further discuss evaluation, please feel free to reach out at eric.persaud@nih.gov



Kathy Ahlmark

Health Specialist

Worker Training Program

Division of Extramural Research & Training

National Institute of Environmental Health Sciences

Data Management System (DMS)

Upcoming Redesign

Disaster Supplements: Propose adding additional data entry fields in the DMS to:

- Capture the effectiveness of training (what participants learned or demonstrated they can do)
- Relate training to where a disaster has actually occurred (location of disaster and location of training)

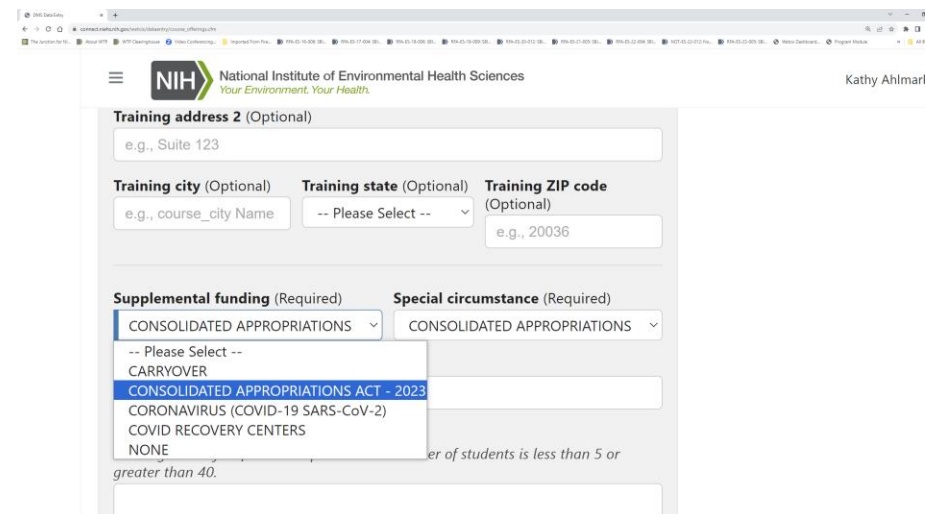
Disaster Supplement additional data could include:

 Community partners

 Outcomes

 Effectiveness

 Impact



The screenshot shows a web form for the National Institute of Environmental Health Sciences. The form includes the following fields:

- Training address 2 (Optional)**: e.g., Suite 123
- Training city (Optional)**: e.g., course_city Name
- Training state (Optional)**: -- Please Select --
- Training ZIP code (Optional)**: e.g., 20036
- Supplemental funding (Required)**: A dropdown menu with options: CONSOLIDATED APPROPRIATIONS, -- Please Select --, CONSOLIDATED APPROPRIATIONS ACT - 2023 (highlighted), CORONAVIRUS (COVID-19 SARS-CoV-2), COVID RECOVERY CENTERS, and NONE.
- Special circumstance (Required)**: A dropdown menu with the option: CONSOLIDATED APPROPRIATIONS.

Below the dropdowns, there is a text field with the placeholder text: "er of students is less than 5 or greater than 40."

**ECWT seems to be the model for a lot of the type of information that could be captured since it has more granular data of who was trained and job placement.

Frequency of data entry

Although the DMS is open for data entry during the entire training year – most data is entered just before the two data entry deadlines (April 1 and August 1 for HWWT, ECWT, and HDPT; June 1 and October 1 for DOE).

Real time data entry (weekly or monthly) would be very helpful to capture and report on training related to disasters.

Curricula Catalog

Any new curricula needs to be approved by your program administrator and uploaded into the curricula catalog.

It is important that the curricula catalog be kept up to date, so you are encouraged to check it and make updates.

SBIR E-Learning for HAZMAT Program

Develops e-Learning health and safety training products in a variety of formats to assist both students and instructors in the training and education process.

89	Grants supported since 1997
6	Current grantees
\$699,212	Funding dollars in FY23

- Design innovative technologies
- Enhance worker training in disasters and emergencies
- Receive patents and awards
- Commercialize products for broader use



SBIR E-Learning for HAZMAT Program:
niehs.nih.gov/careers/hazmat/training_program_areas/att/index.cfm

Fiscal Year 2023 SBIR Awards



Henry Ryng - INXSOL LLC

HazMat Risk Management, Readiness and Training Platform



Cesar Bandera – Cell Podium, LLC

Team-Based Virtual Field Exercises for HAZMAT Training



Ernest Vincent Cross – Charles River Analytics, Inc.

IMPRINT Confined Spaces

NIEHS WTP SBIR E-Learning for HAZMAT Program Fact Sheet

- Impacted worker training in various occupational sectors.
- Provided opportunities for commercialization and patents.
- Facilitated partnerships among small businesses that develop technologies and WTP consortiums that deliver training.



Program Overview

The National Institute of Environmental Health Sciences (NIEHS) Small Business Innovation Research (SBIR) E-Learning for Hazardous Materials (HAZMAT) Program funds small businesses, or grantees, to develop innovative applications or technologies that are used for health and safety training.

These technologies aid in the mission of the broader NIEHS Worker Training Program (WTP) – to prevent work-related harm by providing training for emergency responders, skilled support personnel, and workers involved in the cleanup, removal, or containment of hazardous materials.

This fact sheet describes how the NIEHS SBIR E-Learning for HAZMAT Program has:

- Impacted worker training in various occupational sectors.
- Provided opportunities for commercialization and patents.
- Facilitated partnerships among small businesses that develop technologies and WTP consortiums that deliver training.

Technology Enhances Worker Training

Proper training can mean the difference between life and death for workers who handle hazardous materials or respond to manmade or natural disasters. Although training for such workers has traditionally taken place in physical classrooms, recent technological advances have facilitated more accessible and interactive training through electronic platforms. Technology-enhanced training products can help workers safely assess, respond to, and protect themselves and others from harmful exposures on the job.

In 1997, WTP began conversations to establish an electronic learning (e-learning), or technology-enhanced training products, initiative. These conversations led to the development of a formal e-learning guidance document and the beginning of the NIEHS SBIR E-Learning for HAZMAT Program (SBIR HAZMAT).

In 2001, WTP examined the technological divide for workers in diverse sectors, as well as protocols to aid in knowledge transfer through blended learning techniques. These blended learning techniques include the delivery of training content through a variety of combined methods, such as face-to-face classroom instruction and digital instruction through online, mobile, or virtual activities. WTP has since adopted many best practices in using technology for HAZMAT training.

At the turn of the 21st century, the worker training community witnessed a technology revolution that would enable workers in high-risk environments to better prepare for hazardous incidents and emergencies.

SBIR HAZMAT grantees demonstrate a commitment to technological innovation and dedication to improving worker health and safety.

Benefits of Innovative Products and Technologies

SBIR HAZMAT grantees are encouraged to partner with WTP-funded organizations that deliver health and safety training across various program areas – from hazardous waste, to nuclear weapons sites, to disasters, and more. Grantees have revolutionized methods to deliver training to workers through the development and use of online and web-based learning, mobile applications, video games, virtual reality, and immersive learning systems.

Many grantees have developed mobile applications that allow accessibility to health and safety information in areas with limited Internet connection. Others have developed learning management systems that store training modules that can