



## Outcome Measures: Impact of Training on Worker and Community Preparedness



Photo Courtesy of Sustainable Workplace Alliance

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## Introduction

- Disasters happen quickly, limiting resources and capacity
- Too late to start thinking about evaluation
- Designing evaluation methods and recognizing intended outcomes is needed before
- Methods do not need to be a quiz or survey – Use innovative and practical ways
- Voices of the trainers and workers
- Valuable to improving training and supporting NIEHS justification to congress and stakeholders
- NIEHS and the Clearinghouse is a resource here to aid in evaluation and other technical barriers

Photo by  
Midwest  
Consortium.

YouthBuild  
Louisville  
training.





## 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](https://tools.niehs.nih.gov/wetp/public/hasl_get_blob.cfm?ID=11961)

**Technology Tips for Virtual Meetings and Interactive Online Sessions.**

**WETP Logic Model:** [https://tools.niehs.nih.gov/wetp/1/12FallMeeting/wetp\\_logic\\_model.pdf](https://tools.niehs.nih.gov/wetp/1/12FallMeeting/wetp_logic_model.pdf)

**Minimum Criteria.**

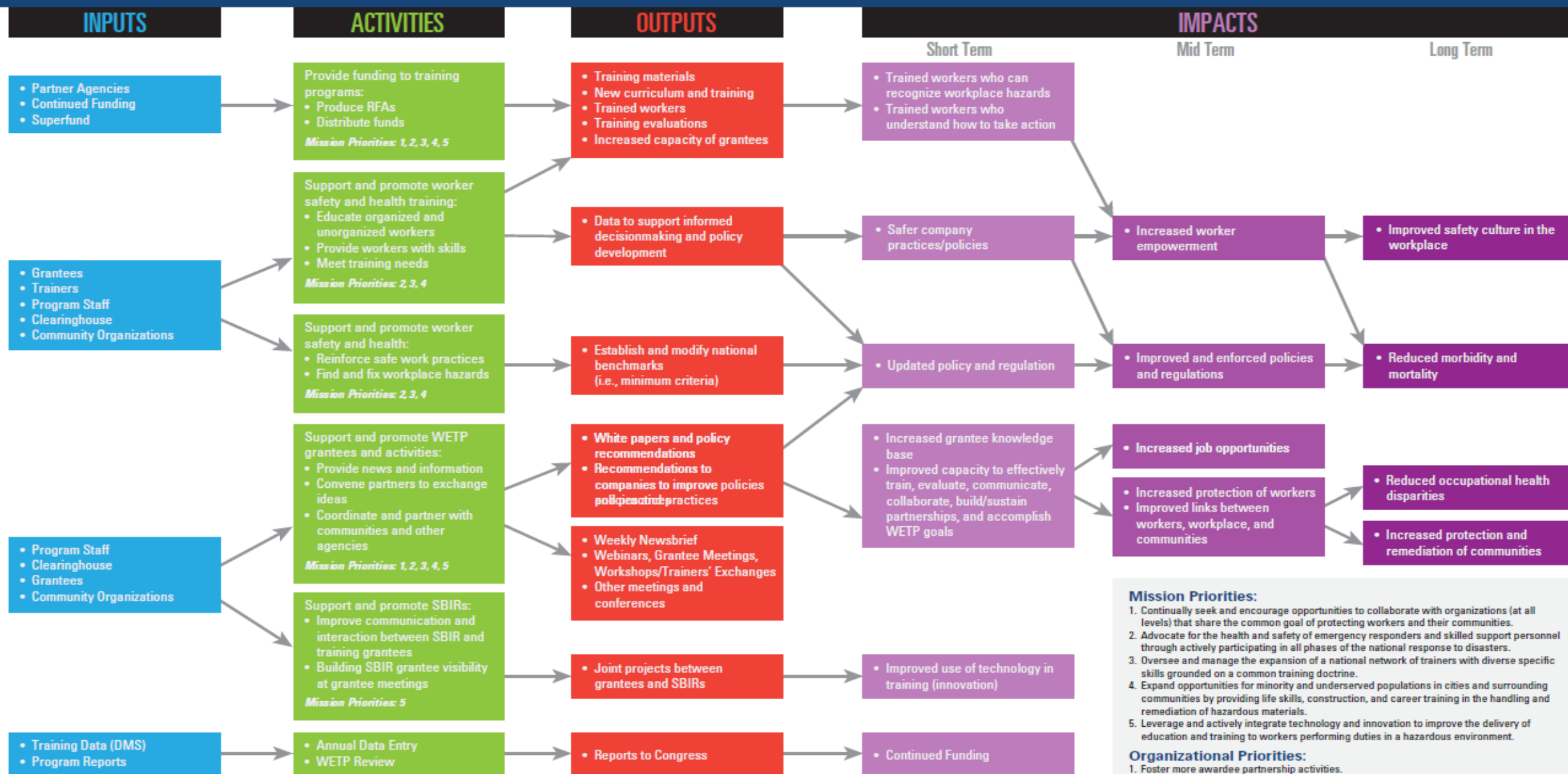
## Protecting Workers is a Core Value

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
- Training should be supplemented with critical site-specific training
- Filling communication gaps and fostering critical community partnerships
- Take a preventive approach



# Worker Education and Training Program (WETP) Logic Model

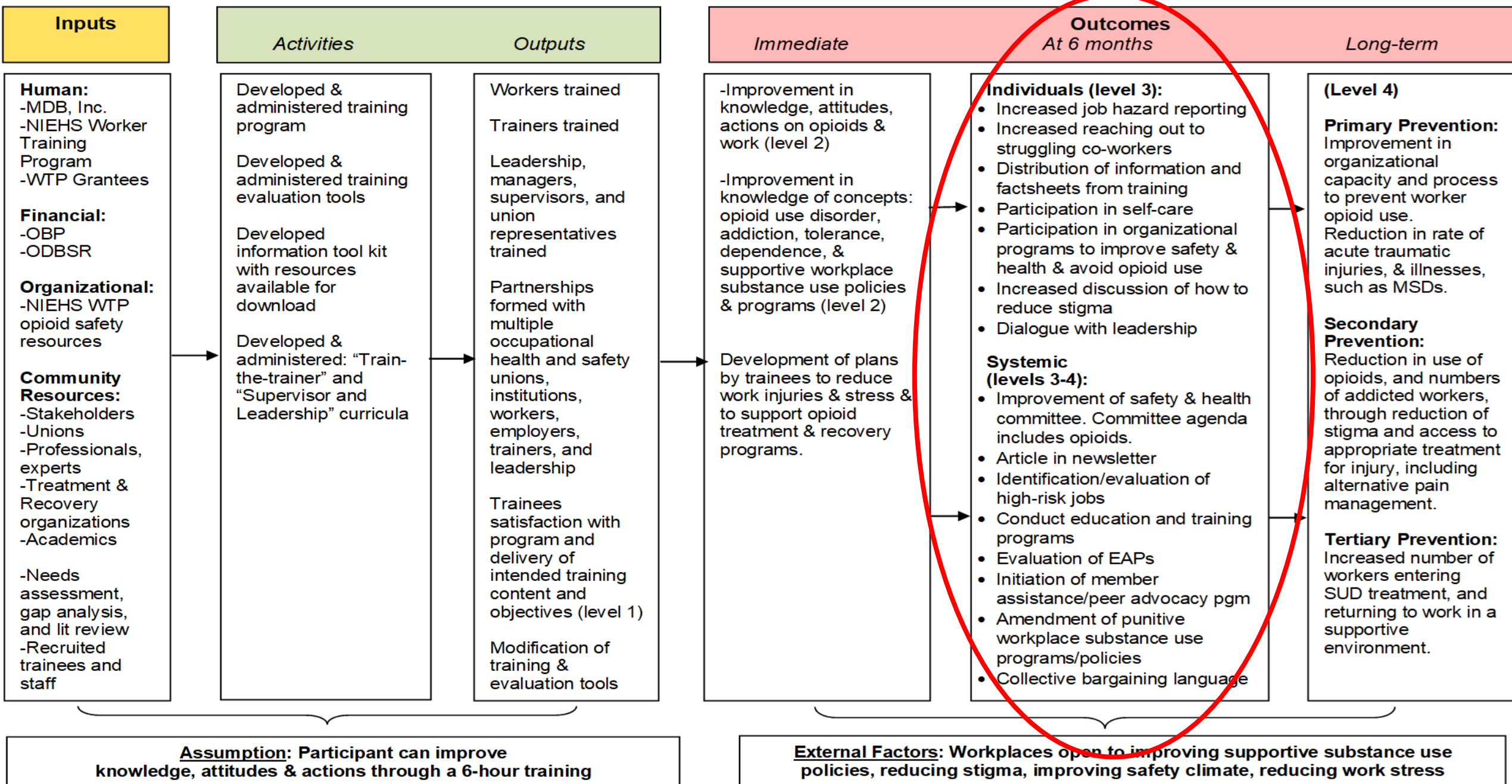


## Mission Priorities:

1. Continually seek and encourage opportunities to collaborate with organizations (at all levels) that share the common goal of protecting workers and their communities.
2. 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.
3. Oversee and manage the expansion of a national network of trainers with diverse specific skills grounded on a common training doctrine.
4. 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.
5. 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:

1. Foster more awardee partnership activities.
2. Institutionalize the WETP in awardee organizations by capturing program history and maintaining strong leadership development programs.



Ongoing evaluation of training and dissemination of resources and findings

## Outcome Measures before Delivering Training

What are your trainees supposed to learn?

The hazards and knowledge needed to work safely

The skills tested in a safe environment

How can you measure those intended outcomes?

Tabletop exercises

Role-playing

Simulations

Photo by New England Consortium



## Successful Health and Safety Training Partnerships

**Partner: Pathstone**, a nonprofit organization providing community development and humanitarian services in Puerto Rico since 1998. Pathstone has been a local resource on the island that now has disaster instructors who can advocate for health and safety.

*In 2022, OSHA 24-hour Disaster Site Worker course plus Technical Assistance was held for 26 PathStone outreach personnel in Puerto Rico.*

**Partner: Migrant Clinicians Network**, has reached over a thousand workers in the past three years, including teachers, school nurses, health department personnel, community first responders, and health care personnel.





## Quantitative and Qualitative Measures

### Quantitative (The what?)

Survey questions

Tests

Counts (How many took class)

Numerical scale (Agreement)

### Qualitative (The why?)

Voices

Case studies

Interviews

Observation notes

Videos and photographs



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

## 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

## Measures Grantees have Shared

- National PETE provided a 40-hour Hazwoper (Moderate Risk) course to PathStone Corporation in Puerto Rico. Ten participants successfully completed the course: **Strongly Agree, Agree, Disagree, Strongly Disagree** with the 13 statements between 90 – 100%. or Non-Applicable.
- Implementing the fourth tier of the Kirkpatrick model to gather **impact evaluation**. A survey has been developed to send to direct training participants and one to Peer Trainers after their TTT sessions and after the direct training they give to assist the Training Director in addressing issues, providing support tools, and measuring impact. (TNEC)
- **Questionnaires** including for example “after completing the TTT, how comfortable are you..”
- **Student demographics** and **work characteristics**
- Quotes: Through activities I felt involved in learning. I found the hands-on learning with the PPE and CPR very valuable.

## Success Stories

Diana's Story: "While focusing on my internship, I structured my time and applied for jobs with customized cover letters, resumes and went well prepared for the interviews. MRNY gave me an excellent recommendation letter that made me cry, **increased my self-esteem** and **set me apart from the other candidates**; also guided me to professionally navigate the complex situations that I came across. I am very **grateful for the training** because it definitely changed my life; it gave me the tools I needed to potentialize my professional skills, self-worth and gave me personal validation and recognition...I am **making a huge difference in the lives of pregnant patients' population**, their families and communities by becoming autonomous, wise, healthy, educated, strategist, resilient, curious, creative, self-conscious, sociable and determined to achieve present SMART goals and to formulate new ones for their futures. (*Grantee: Atlantic Center*)

K. Graves, a single mother of seven kids, graduated from ECWTP in 2020 and **became a licensed mold remediation contractor** in Louisiana following Hurricane Ida. She **started her company**, HER Restoration Solutions, LLC, after her home was heavily damaged by the storm and many neighbors needed help restoring their homes. Partnering with an ECWTP grantee and a nonprofit organization, **Graves assisted with outreach and recruitment of an all-female class**, helped mentor and train the women, and then **employed the women to conduct mold remediation** on a full-time basis. (*Grantee: Historically Black Colleges and Universities Consortium*)



## Success Stories

- Two trainees were ready to put the knowledge and skills learned from the ICWUC to work. **They developed and led a dynamic training program in Spanish for trainers** with first-hand knowledge of their communities but who lacked technical health and safety knowledge.
- Some responses included sharing information with co-workers to increase their safety **awareness** and reconfiguring where to store household chemicals. Others report being more proactive in **teaching** people where to find SDS and how to read them. Still, others **report** helping co-workers identify chemicals. Another participant reports being more vigilant, ensuring the information is obtainable to all employees, and generally being more aware and able to **recognize hazards** before they become an issue. (ICWUC)

## ECWTP Evaluation as an Example of Intangible Benefits

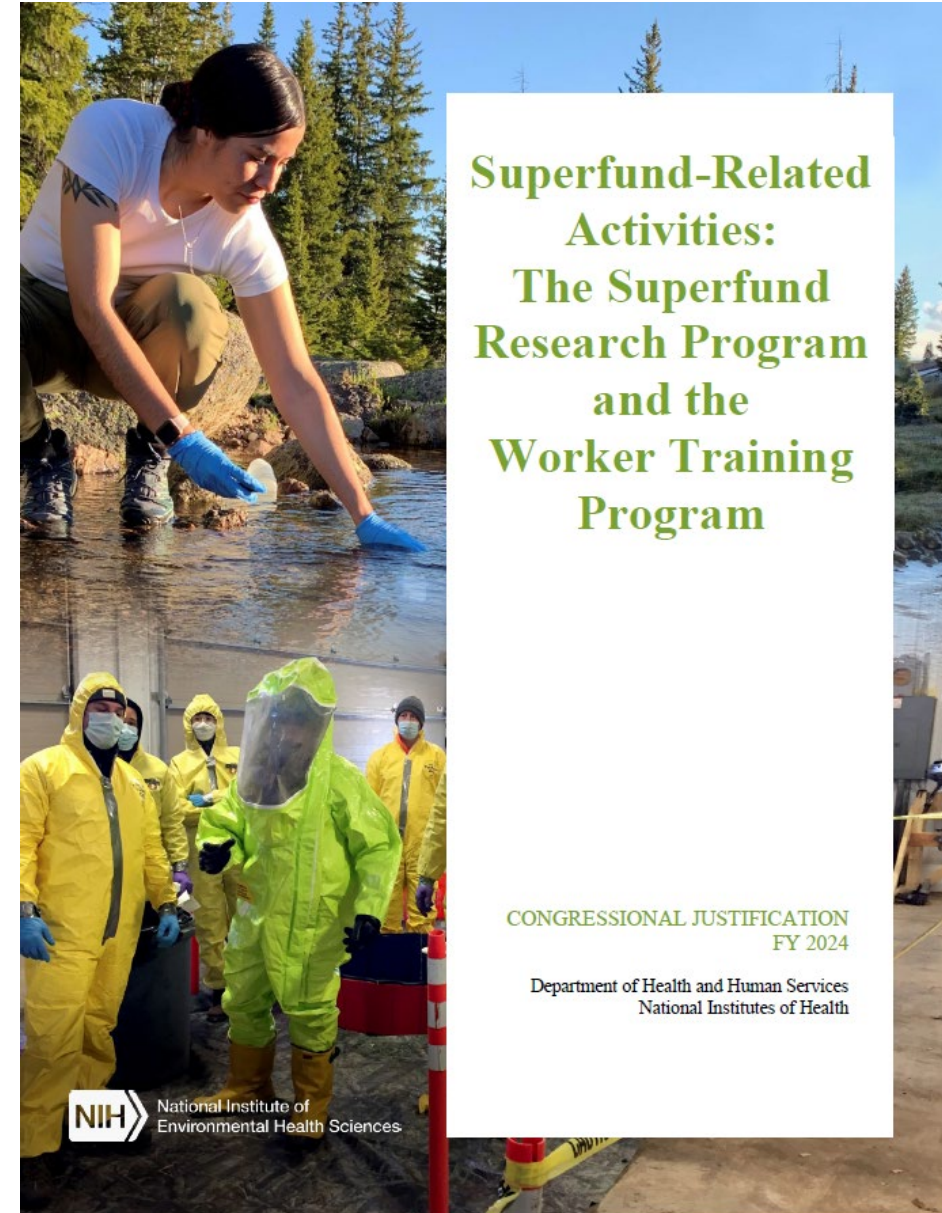
### Anecdotal benefits to trainees

- 🏠 Building a life and career after incarceration, homelessness, or unemployment
- 👥 Helping and giving back to their community
- 🏠 Ability to buy a home or rent sustainably, pay for children's education, etc.
- 🌱 Path towards leadership position
- Life skills and social services benefits
- ♥ Feelings of being supported and helped to move forward in life

“Many of those trainees are coming from these tiny (Alaskan) villages and to give them this training and support around environmental and hazmat issues that they can bring back to these villages adds a whole other kind of impact there, because those communities are so small and tightly knit and are so in need for these kinds of skills and expertise. Training just one or two people from a village can have a huge impact in terms of a way a village operates when it comes to environmental hazards, the way waste is managed, and response to disasters.”

## Importance of Evaluation

- Training can overcome issues in disaster response
- Evaluation helps identify if your training is reaching intended goals
- Evaluation is an important component of the NIEHS Worker Training Program
- Findings provided can be used to report back to data calls and stakeholder requests
- Helpful in annual Congressional Justification





## Conclusion and Future Directions

### Points for Discussion

Interest in common measures

Innovative ways in evaluation

Ways to document and share findings

How can NIEHS and Clearinghouse support efforts



Photo by IAFF



Photo by Atlantic Center



## Thank You!



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](mailto:eric.persaud@nih.gov)

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