



Training for Recovery: Accomplishments under the American Recovery and Reinvestment Act Funding

National Institute of Environmental Health Sciences, Worker Education and Training Program



NIEHS
National Institute of
Environmental Health Sciences

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

Prepared by

MDB, Inc.

Doing Well by Doing Good

Introduction

In response to the economic crisis of 2008, and with President Barack Obama's urging, the U.S. Congress passed the American Recovery and Reinvestment Act of 2009 (ARRA), also commonly known as the Recovery Act. The objective of the Recovery Act is to stimulate the economy through promotion of new and existing jobs, investment in long-term growth, and financial accountability. Recovery Act funds were distributed to federal, state, and local agencies in hopes that the money will flow down to organizations, academia, and businesses that will retain and create new jobs.

The Recovery Act is currently funding several projects across the country, including construction and repair of roads and bridges, renewable energy programs and weatherization, and scientific research. Many of these projects are in the emerging green jobs sectors, such as weatherization and retro-fitting, and involve work with hazardous material, waste, construction and deconstruction. To prevent injury, illness, and public exposures from hazardous materials, targeted, job-specific safety and health training is paramount, especially for underserved, minority, and lower wage workers.

The National Institute of Environmental Health Sciences (NIEHS) Worker Education and Training Program (WETP) provided Recovery Act funds to hazardous waste worker training organizations and small businesses to support the health and safety training for under- and un-employed workers in the hazardous materials and green jobs sectors.

This report documents the projects and activities of the NIEHS WETP awardees who have received Recovery Act funds, and highlights worker safety and health training organizations' subsequent successes and best practices.

ARRA Funds

On February 13, 2009, Congress passed the American Recovery and Reinvestment Act of 2009. The Recovery Act of 2009 had five purposes:

- (1) To preserve jobs, create jobs, and promote economic recovery;
- (2) To assist those most impacted by the recession;
- (3) To provide investments needed to increase economic efficiency by spurring technological advances in science and health;
- (4) To invest in transportation, environmental protection, and other infrastructure that will provide long-term economic benefits; and
- (5) To stabilize state and local government budgets, in order to minimize and avoid reductions in essential services and counterproductive state and local tax increases.

The Act distributes roughly \$787 billion for tax benefits, entitlement, contracts, grants and loans. The money is distributed to federal agencies, where it is then made available to state and local agencies, dispensed directly to academia, business, and non-profit organizations, or used to provide tax cuts and benefits to families and businesses. State and local agencies also make funds available for contracts and grants to academia, businesses, and organizations that hire individuals as needed.

NIEHS WETP

The NIEHS WETP was established under the Superfund Amendments and Reauthorization Act (SARA) of 1986 to provide safety and health training and education to workers engaged in activities related to hazardous waste removal, containment, transportation, and emergency response. The primary purpose of this program is to fund non-profit organizations with a demonstrated track record of providing occupational safety and health education and delivering high quality training to workers who are involved in handling hazardous waste or in responding to emergency releases of hazardous materials. The program aims to prevent work-related harm by assisting in the training of workers about how best to protect themselves and their communities from exposure to hazardous materials encountered during hazardous waste operations, hazardous materials transportation, environmental restoration, nuclear weapons facilities, or chemical emergency response and to undertake brownfields and minority workforce development. Since its inception in 1987, the WETP has developed a strong network of non-profit organizations that are committed to protecting workers and their communities by delivering high-quality, peer-reviewed safety and health curriculum to target populations of hazardous waste workers and emergency responders.

Grant recipients are non-profit organizations with demonstrated access to appropriate worker populations and experience in implementing and operating worker health and safety education training programs.

The WETP operates in five major program areas. The core program is the Hazardous Waste Worker Training Program (HWWTP), which provides model occupational safety and health training for workers. This program encourages innovation for training difficult-to-reach populations by addressing issues such as literacy and adult education techniques. The NIEHS/ Department of Energy (DOE) Nuclear Worker Training Program was the result of an interagency agreement in 1992 between NIEHS and DOE to provide safety and health training for workers who may be engaged in hazardous substance response or emergency response at DOE nuclear weapons facilities. The Minority Worker Training Program (MWTP) and the Brownfields Minority Worker Training Program (BMWTP) are two programs created to recruit and train young minority individuals living near hazardous waste sites or in communities at risk of exposure to contaminated properties with specific focus on obtaining work in environmental remediation or construction. The BMWTP, a subset of MWTP, was funded with the Environmental Protection Agency (EPA) under an interagency agreement in 1998 and ended in 2008. The Hazmat Disaster Preparedness Training Program (HDPTP) was developed as a result of the experiences and lessons learned in recent national disasters, including the attack on the World Trade Center in 2001. The program is an extension of the HWWTP, and it seeks to prepare experienced workers to prevent, deter, or respond to terrorist or man-made incidents in a wide variety of facilities and high-risk operations.

NIEHS WETP and ARRA

The NIEHS WETP Recovery Act funds support health and safety training for underserved populations in the hazardous materials and green jobs sectors. In 2009, NIEHS WETP received \$6,784,076 in ARRA funds to provide administrative supplements to eligible awardees. Priorities for ARRA supplemental applications include health

and safety training for target populations employed in the hazardous components of jobs supported by the federal stimulus and recovery program. Workers receive training about exposure in hazardous waste cleanup, large-scale construction, demolition, brownfield-type redevelopment and public works projects, as well as commercial and residential weatherization, alternative energy development, green remediation, green construction and emerging industries like nanotechnology.

Specifically, the Recovery Act funds support job creation and retention, as well as the prevention of work-related accidents in underserved populations by providing outreach, training and job placement of underserved populations in remediation and hazardous waste industries. The Recovery Act also supports training for the emerging “green jobs market as green job training and education is an environmental public health imperative to avoid the creation of negative health impacts. During the past several years, the movement towards a “green” economy offers new opportunities for the unemployed and underemployed. Workers train to perform weatherization activities or retrain to become weatherization technicians, weatherization supervisors and energy auditors. They also train on the safety and health concerns of green construction and green chemistry.

NIEHS WETP and SBIR Awardees that Received ARRA Funds

AWARDEE	AMOUNT RECEIVED
Midwest Consortium	\$620,494
LIUNA	\$800,000
New Jersey/New York Hazardous Materials Worker Training Center	\$400,000
OAI, Inc	\$482,000
International Union of Operating Engineers	\$441,000
Center for Construction Research and Training (CPWR)	\$615,000
International Brotherhood of Teamsters	\$628,000
SEIU Education and Training Fund	\$265,136
The New England Consortium	\$373,270
Dillard University	\$400,000
International Chemical Workers Union	\$403,044
Western Region Universities Consortium	\$425,000
United Steel Workers	\$720,250
Information In Place	\$46,716
MetaMedia Training International, Inc	\$46, 737
BandeMar Networks	\$117,429
Total Amount Funded	\$6,784,076

Methodology

In order to best document the accomplishments, best practices, and lessons learned from programs, activities, and projects funded by the Recovery Act, structured interviews were conducted with NIEHS WETP and SBIR awardees who received ARRA funding. A list of questions was provided to the interviewees to serve as a guide for the discussion. The questions were framed in a manner to capture the achievements and success stories that each awardee was able to accomplish with the ARRA funds. All interviews were conducted over the phone from June to July 2010. The results of the interviews can be found in each individual success story.

Success Stories

These success stories are only a sample of what each ARRA fund recipient accomplished as of July 2010. The training statistics were also reported in the Progress Reports as of August 1, 2010. Training has continued since August 1, 2010 and more people have been hired for jobs since the statistics were provided for the report. Please be mindful that each story is a work in progress, offering only a glimpse of the successes that may have larger impacts in the near future.

National Institute of Environmental Health Sciences

Worker Education and Training Program (NIEHS WETP)

American Recovery and Reinvestment Act of 2009 projects funded under the NIEHS WETP Hazardous Waste Worker Training (HWWT) Program, Minority Worker Training Program (MWTP) and Small Business Innovative Research (SBIR) Hazmat E-Learning Program

Background

The major objective of the NIEHS WETP is to prevent work-related harm by assisting in the training of workers about how best to protect themselves and their communities from exposure to hazardous materials encountered during hazardous waste operations, hazardous materials transportation, environmental restoration of contaminated facilities or chemical emergency response.

During the past several years, the movement towards a “greener” economy has greatly expanded, offering new opportunities for all workers, but particularly for those unemployed or underemployed. NIEHS WETP has documented the need for safety and health training in the emerging green sector including the areas of commercial and residential weatherization, alternative energy development, green remediation, green construction and emerging industries like nanotechnology.

The NIEHS WETP has recently awarded \$6,784,076 in ARRA funds to provide administrative supplements to eligible awardees. Priorities for ARRA supplemental applications included health and safety training for target populations that will be employed in the hazardous components of jobs that will be supported by the federal stimulus and recovery program. For the emerging green sector, this includes the customization of safety and health training for emerging jobs in commercial and residential weatherization, alternative energy development, green remediation, green construction and emerging industries like nanotechnology.

Projects Funded

- » The Midwest Consortium, based at the University of Cincinnati, has received \$620,494 in ARRA funds for training hazardous waste site cleanup workers and to train local workers who are unemployed or underemployed to conduct weatherization activities in Indiana, Illinois, Kentucky, Michigan, Ohio, Tennessee and Wisconsin.
- » The Laborers-AGC Education and Training Fund has received \$800,000 in ARRA funds to expand their current HWWT Program to meet the needs of the emerging weatherization and sustainable construction workforce. They will target workers who are affected by the current employment crises. Categories of training include Weatherization Installer/Technician, Weatherization Supervisor, and Energy Auditor.
- » The New Jersey/New York Hazardous Materials Worker Training Center, based at the University of Medicine and Dentistry of New Jersey, has received \$400,000 to provide training to workers in various hazardous waste areas, especially those who will be engaged in cleaning up newly-funded ARRA Superfund sites in New York and New Jersey. The scope of work includes hazardous waste cleanup and green jobs initiatives under the HWWT and the Minority Worker Training Programs. The participants of the Center that received administrative supplement funding are UMDNJ-School of Public Health, the New York Committee for Occupational Safety and Health, and the New York District Council of Carpenters.
- » OAI, Inc. has received \$482,000 to implement health and safety training for newly hired and/or retrained weatherization, construction, environmental remediation and debris-removal workers and contractors in Illinois, Louisiana, Pennsylvania and Maine.
- » The International Union of Operating Engineers’ National Training Fund (IUOE) has received \$441,000 to provide training for workers who are applying green concepts, or implementing green technologies and alternative energy sources to projects directly supported by the ARRA.

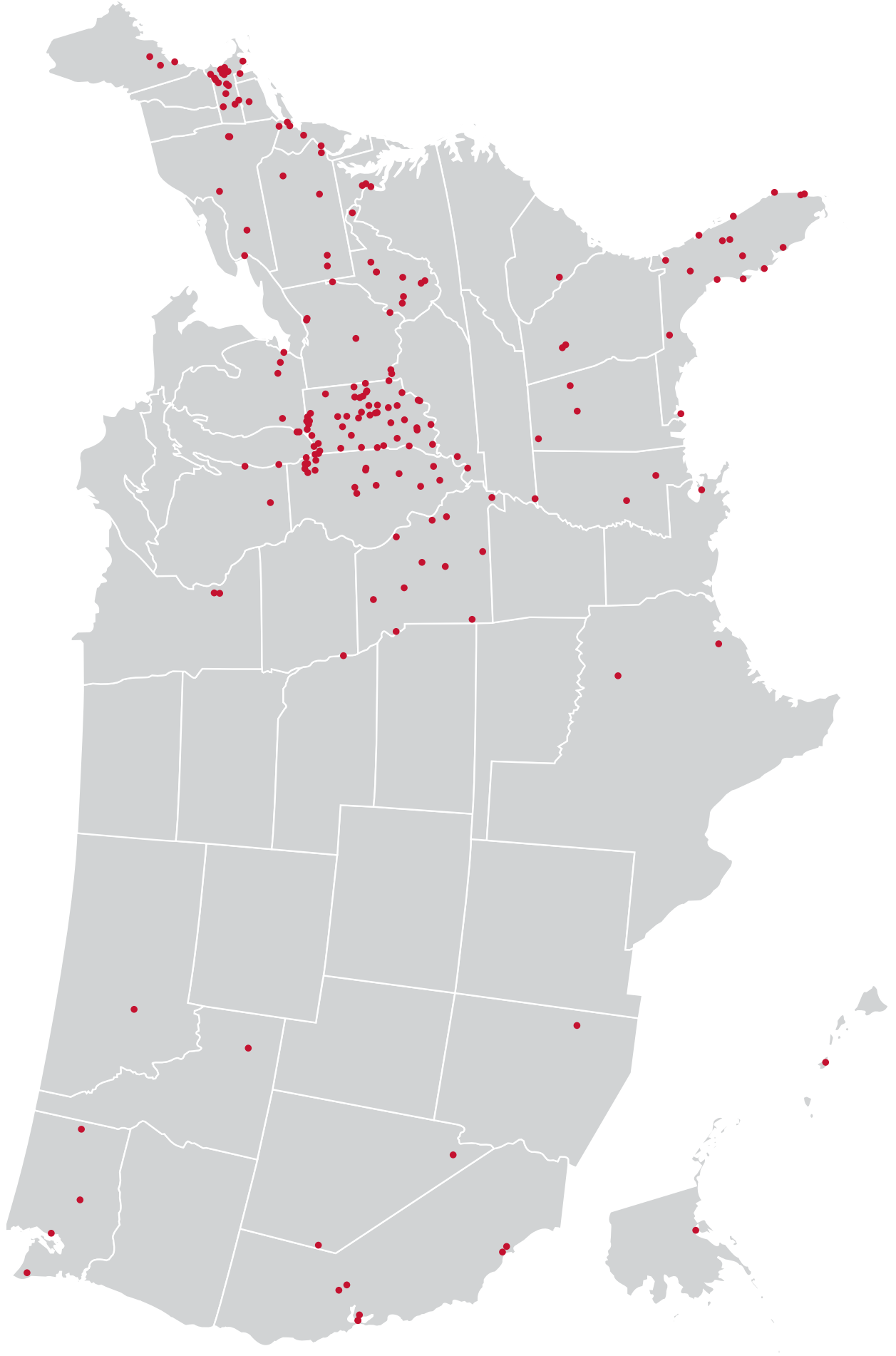
- » The Center for Construction Research and Training (formerly the Center to Protect Workers Rights) has received \$615,000 to deliver training for green construction jobs, including weatherization and alternative energy sources. This includes a train-the-trainer program to conduct energy audits using the Insulation Energy Appraisal Certification Program (IEAP). This trainer program will teach workers how to conduct energy appraisals of existing buildings, work that will be critical as older buildings are weatherized. Under the Minority Worker Training Program, they will expand their comprehensive environmental and construction training for under-represented workers in four communities including New Orleans, LA; St. Paul, MN; and Los Angeles and East Palo Alto, CA to train and employ workers in the green construction, wind turbine, and photo-voltaic industries.
- » The International Brotherhood of Teamsters (IBT) has received \$628,000 to provide required worker safety and health training for workers who will be employed on ARRA-funded hazardous waste cleanup projects and large-scale construction projects.
- » The SEIU Education and Training Fund has received \$265,136 to train healthcare workers, state highway and waste-water workers in Connecticut, Maine, New Hampshire and New York.
- » SBIR awardee BandeMar Networks has received \$117,429 to provide high school and college undergraduate students with hands-on experience with state-of-the-art health training and research translation technologies.
- » The New England Consortium (TNEC), based at the University of Massachusetts at Lowell, has received \$373,270 to provide training courses to students identified by workforce development programs in New Bedford, Boston and Quincy, Massachusetts. TNEC is also partnering with the Massachusetts Division of Occupational Safety (MA-DOS) on a series of trainings for state agencies. The Consortium will also provide training to the City of Somerville, Massachusetts, Department of Public Works.
- » Dillard University has received \$400,000 to implement Minority Worker Training Programs in Atlanta, Georgia and the four-county area surrounding Hattiesburg, Mississippi. Participants will be recruited from low-income communities, selected, trained, and placed into employment. The project will also provide green supervisor training for 40 selected program graduates in Baton Rouge and Detroit.
- » SBIR awardee MetaMedia Training International, Inc. has received \$46,737 to develop additional lessons and scenarios for the parent grant's "HazMatIQ Four Step System eLearning" program that assists in the training of firefighters. They will hire an additional graphic designer/programmer to assist in course development.
- » The International Chemical Workers Union and its consortium partner the Coalition of Black Trade Unionists (CBTU) has received \$403,044 to prepare members of underserved populations to gain employment in remediation and hazardous waste industries. The program will be conducted in Detroit, MI; Chicago, IL; Oakland, CA; and Anniston, AL.
- » The Western Region Universities Consortium, centered at University of California at Los Angeles, has received \$425,000 to train workers and trainers about potential exposure to the hazardous materials, waste and related safety hazards of jobs supported by the federal stimulus act and in the emerging areas of green building and green chemistry.
- » The United Steel Workers (USW) has received \$720,250 to provide training for at-risk construction workers engaged in highway and bridge construction supported by the federal stimulus and recovery program and will carry out a safety and health training partnership with the A. Philip Randolph Institute, Housing Authority of the City of Pittsburgh and the Urban Green Job Alliance to provide training for low-income residents for public housing improvement (weatherization) jobs created through ARRA.
- » As an SBIR awardee, Information In Place has received \$46,716 to design, develop, and evaluate two additional training modules with integrated job aids that address health and safety of green building materials.



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Cities where ARRA-funded hazardous waste worker training has taken place.



Success Stories

5	BanDeMar Networks
7	CPWR—The Center for Construction Research and Training
10	Dillard University Deep South Center for Environmental Justice
12	International Brotherhood of Teamsters
14	The International Chemical Workers Union Center for Worker Health and Safety Education
16	International Union of Operating Engineers National Training Fund - National HAZMAT Program
17	LIUNA Training and Education Fund
18	MetaMedia Training International, Inc.
20	Midwest Consortium for Hazardous Waste Worker Training
22	The New England Consortium
24	The New Jersey/New York Hazardous Materials Worker Training Center
25	OAI, inc.
28	SEIU Education and Support Fund
30	United Steelworkers Charitable and Educational Organization
32	Western Region Universities Consortium
34	Wisdom Tools (formerly Information in Place)

BanDeMar Networks

To ensure that deployed skilled support personnel are properly trained for emergencies, BanDeMar Networks, an SBIR awardee, developed the Just-In-Time Training for Emergency Incidents System (JITTEIS), a collection of theme-specific safety videos delivered in real-time to the cell phones of deployed skilled support personnel (SSP). The ARRA funds allowed BanDeMar Networks to develop additional courses and to pursue further testing of the technology.

The Recovery Act funds enable BanDeMar Networks to bridge the gap between product development and product commercialization (a major hurdle in the SBIR program) while providing a critical service for a government exercise. For example, with the support of the funds, JITTEIS was used during the April 2010 Liberty RadEx, a radiological terrorism training exercise performed in Philadelphia, PA and sponsored by the U.S. Environmental Protection Agency (EPA). JITTEIS was deployed at the Unified Command Center to push just-in-time safety training and logistics videos to the cell phones of all safety officers at all venues, including subway stations, water treatment plants, and Navy yards. JITTEIS successfully inter-operated with diverse mobile devices, including personal and issued phones, with and without data plans or web browsers. In total, JITTEIS pushed 24 videos to every cell phone enrolled in the exercise. Due to the success exhibited at the exercise, the Center for Disease Control and Prevention (CDC) Office of Public Health Preparedness and Response purchased the product for one year. Furthermore, BanDeMar Networks is working with the University of Medicine and Dentistry of New Jersey (UMDNJ) to incorporate cell phone courses into the safety and health refresher training framework and to improve outreach between care providers and patients.

BanDeMar Networks hired three full-time employees as well as summer undergraduate and high school interns under the Administrative Supplement. These students participate in training for a continued career in a technology-driven world with the skills necessary for content development and business leadership.



Photo provided by BanDeMar Networks



Photo provided by BanDeMar Networks

About Just-in-Time Mobile Multimedia

The Just-in-Time Mobile Multimedia (JITMM) platform, on which JITTEIS is built, reliably delivers multimedia lessons to cell phones. Lessons consist of brief safety videos on specific topics that are “pushed” onto the cell phones of responders and civilians when deemed necessary by the safety officer. The “no cell phone left behind” philosophy of JITMM makes it a valuable communications medium to vulnerable populations who typically lack access to the Internet.

About BanDeMar Networks

BanDeMar Networks, founded by Dr. Cesar Bandera, is an information technology company specializing in the development and deployment of technological intellectual property for rich media markets including e-learning, scientific outreach, and surveillance/security. Located in the heart of the New Jersey Institute of Technology and partnered with the University of Medicine and Dentistry of NJ, BanDeMar Networks benefits from a critical mass of public health and engineering subject matter expertise.

CPWR—The Center for Construction Research and Training

The Center for Construction Research and Training, formerly the Center to Protect Worker Rights, used its Recovery Act funds to support its Minority Worker Training Programs in four major communities: East Palo Alto, CA; Los Angeles, CA; St. Paul, MN; and New Orleans, LA. The program received \$615,000 to train unemployed, underemployed and dislocated workers facing a myriad of barriers to employment, such as lack of work experience, former incarceration, and recent unemployment.

CPWR, through its four training centers, provides technical construction and environmental remediation courses, including General Construction Safety (OSHA 10- and 30- hour), Basic Construction, and OSHA 40-Hour Hazardous Waste Worker. Other essential training components, such as life skills, basic math skills, reading and writing, and computer skills, are provided to trainees with the support of the ARRA funds. Life skills training is important to ensure the success of the workers, many of whom have not held formal employment before. Graduates of the program pursue work in general construction, environmental remediation, vegetation restoration, hazardous waste, factory and warehouse, recycling industry, oil refinery, and apprenticeships.

The Recovery Act funds allow for training organizations to offer training opportunities to a larger number of individuals who are under- and un-employed, resulting in larger numbers of participants in the training programs. The Recovery Act funds give these individuals an opportunity to earn certifications in various environmental remediation skills, such as Hazardous Waste Removal, Asbestos Abatement Removal, and Green Construction. These training programs change participants' lives, as they are able to earn a living wage and provide for their families.

In response to the emerging “green” economy and opportunities, CPWR developed and incorporated into the existing construction training curricula two new 40-hour green courses—Introduction to Green Building



Photo provided by CPWR

ARRA STATISTICS

ARRA FUNDING RECEIVED
\$615,000

PEOPLE TRAINED
201 (80 MWTP and 121
HWWTP Students)

**NUMBER OF COURSES
TAUGHT**
68

CONTACT HOURS
56,522

**STUDENT DEMOGRAPHICS
(MWTP)**
75 Males
5 Females

RACE (MWTP)
53 African Americans
18 Hispanics
6 Pacific Islanders
3 Caucasians

**EMPLOYMENT PRIOR TO
TRAINING (MWTP)**
66 Unemployed at
program entry
14 Underemployed at
program entry

**JOB PLACEMENT RATE
(MWTP)**
73%

**TYPE OF JOBS OBTAINED
AFTER TRAINING**
General construction,
environmental
remediation, vegetation
restoration workers,
hazardous waste
workers, factory and
warehouse workers,
tunnel (confined space)
workers, pipefitters'
apprentices; carpenters'
apprentices, home
weatherization
retrofitters, landscaping
assistants, trail
maintenance workers,
laborers, apprentices and
journeypersons, recycling
instructors, forest brush
clearance workers, and
oil refinery workers.

Awareness and Introduction to Green Weatherization/ Hands-on Training. Graduates of these green job training programs will work for commercial or residential employers engaged in energy upgrades and renovations/retrofitting, as weatherization installers and energy auditors.

As a result of the Recovery Act funds, CPWR has forged new partnerships with green employers and other agencies working in green industry to support their initiatives and offer advanced training resources. For example, the St. Paul program developed a partnership with Saraf Construction, a green employer, to provide advanced training on weatherization installations. The New Orleans program collaborated with the Department of Housing and Urban Development (HUD) to devise ways of providing training to 500 public housing and Section 8 residents and place them in subsidized summer employment. The Los Angeles program developed a new partnership with the Orange County Community College District and continued its existing collaboration with the Los Angeles Trade Technical College to provide additional green technology training. Graduates of the East Palo Alto program are working on the ARRA-funded San Francisco Public Utilities Commission Water System Improvement Project (WSIP) as tunnel workers, pipe fitters, environmental remediators, and laborers.

Overall, employers are positive in regards to CPWR graduates. Employers praise the skills and discipline of the trainees. For instance, organizations with close relationships with employers note that employers are pleased about how trainees are knowledgeable and understand the environmental industry and how to manage hazardous wastes. They have also mentioned that the graduates set the bar high in terms of expectations for local hires—the candidates are harder working, better trained and more dedicated. For instance, many graduates are stellar employees and promoted to higher positions with more responsibilities. In addition, employers in New Orleans mentioned that the participants' training enabled them to work at trade shows at the New Orleans Convention Center.

In addition to preparing workers to enter the construction and environmental fields, CPWR uses the Recovery Act funds to successfully retain jobs within the organization itself. For instance, the MWTP in East Palo Alto, CA prevented a lay-off by adding staff hours and promoting part-time positions to full-time positions.

*“JobTrain is
a place for
hope, a place
for learning
and in my
case — a place
where if you hit
rock bottom,
they will lift
your spirits
and help you
build a better
foundation
to reach your
goals.”*

—Christopher Garza

Success Story

After spending most of his adult life in prison, **Christopher Garza** had an opportunity to begin a new life. Unable to find work after several months, Chris grew discouraged and depressed. Chris hoped to find employment on his own and rejected any type of perceivable hand out. Chris enrolled in **East Palo Alto's** JobTrain construction program, Project Build. His instructor was immediately impressed with Chris' solid work ethic and commitment to helping fellow classmates. Chris also distinguished himself at the JobTrain Trainee of the Month assemblies where he repeatedly won perfect attendance awards. Chris completed his Project Build training in December 2009. In spite of Chris' criminal background and 15 years of incarceration, JobTrain transformed him. The combination of vocational training and life skills management has impacted and enriched his life.

In a letter to JobTrain supporters, Chris wrote: “Going to JobTrain is one of the only right choices I am proud of in my life this far. JobTrain is a light in my future that has made me let go of a dark and gloomy past. JobTrain has given me a life where I can give back to society and be a productive citizen. JobTrain is a place for hope, a place for learning and in my case – a place where if you hit rock bottom, they will lift your spirits and help you build a better foundation to reach your goals.”

Mountain Cascade recently hired Chris through the Laborers Union Local 389 to work on a special piping project running from San Francisco through Palo Alto. The Project is expected to last five years.

About CPWR

The Center for Construction Research and Training develops training primarily for the workers represented by the 11 Building and Construction Trades Unions that comprise The Center for Construction Research and Training's HWWT and DOE Construction Consortium. The Center is also involved in developing a critical core of Disaster Response Health and Safety Peer Instructors and training workers throughout the country who will train Disaster Site Workers as skilled support personnel. Additionally, the Consortium targets disadvantaged minority adults and youths in environmentally distressed communities. Under the MWTP, the Consortium trains underrepresented minorities in urban areas for work in the construction and environmental remediation industry.



ARRA STATISTICS

ARRA FUNDING RECEIVED
\$400,000

PEOPLE TRAINED

A total of 42 participants were trained with 22 completing the program in Hattiesburg and 20 trainees successfully completing the Atlanta training program.

NUMBER OF COURSES TAUGHT
27

CONTACT HOURS
14,522

STUDENT DEMOGRAPHICS

Collectively, the participants range in age from 23 to 61 with an average age of 34 years old. Eighty-three percent of the participants are male and seventeen percent are female. Ninety-three percent are single or divorced and seven percent are married. Ninety-one percent of the program participants have a high school diploma or a GED. All of the participants are African American. Eighty-one percent of the participants were unemployed and nineteen percent were underemployed.

Dillard University Deep South Center for Environmental Justice

Dillard University Deep South Center for Environmental Justice (DSCEJ) used its Recovery Act funds to implement Minority Worker Training Programs in low-income communities in Hattiesburg, MS and Atlanta, GA. The Center received \$400,000 to recruit, train, and place under- and un-employed residents of low-income communities in construction, deconstruction, demolition, weatherization, hazardous material cleanup and asbestos abatement. In addition to training students, the program continues to work diligently to assist students with obtaining jobs upon graduation. DSCEJ also reconfigured and integrated a 40-hour weatherization course into the curricula. This new “green” course builds on the basic construction course and adds components on deconstruction.

The new program in Hattiesburg, MS provides hands-on training to 22 men from the local community. The program and its students are very successful. For example, one student was hired before graduation and the other 21 trainees received employment cleaning up the oil spill in the Gulf. They were hired to operate skimmers, deploy oil containment booms, and perform beach cleanup. They are trained on the importance of personal protective equipment and safety precautions, and, as a result, they have not experienced acute injuries thus far. DSCEJ hired a full-time program manager and assistant, as well as consultants, to ensure that the program operated at its optimum capacity.

DSCEJ also fully re-launched the worker training program in Atlanta, GA. The program hired new employees to run the site and technical trainers to provide training. Twenty students participated in the training at the site and approximately 10 students were hired to perform oil spill cleanup.

As a result of the training provided by DSCEJ training centers using Recovery Act funds, the men from these communities are given a chance to earn an honest living and positively impact their communities.

“I never would have imagined in a million years that I would have been able to obtain so much in such a short time.”

—Barry Hereford



Photo provided by DSCEJ

Success Stories

In Hattiesburg, **Juan Walker** entered the program after being unemployed for more than a year. He previously worked part-time at Camp Shelby in Hattiesburg. Juan learned about the program from a friend of his parents. He was excited about the opportunities that our program could offer him in his journey toward permanent employment. He thoroughly enjoyed the Basic Skills training and was encouraged when participating in counseling sessions. After 6 weeks in the program, he was offered a job with Masonite Corporation in Laurel - a job he had applied for 2 years earlier. Masonite is a building products company that has been in business for the past 30 to 40 years, and it was a tremendous opportunity for Juan. However, Juan was conflicted because he hoped to finish the program. The Masonite supervisor told Juan that he would be assigned to the night shift after three weeks of training. Juan chose to continue to receive HAZWOPER training while he worked the night shift with Masonite. Upon graduation, Juan stated that the program was very beneficial to him personally because it gave him the opportunity to expand his knowledge and provide him with a new field of work. Not only will this training help him on his new job, but it also will allow him to pursue a career in this arena and possibly start his own contracting business.

Barry Hereford is a 31 year old male who entered the Atlanta-based MWTP program after serving ten years in a Georgia State prison for a vehicular homicide charge. Barry indicated that the greatest lesson he learned in prison was that the world changes, with or without you. He witnessed this for himself while trying to re-enter society as an ex-convict.

Barry's determination to successfully complete the MWTP came from his mother, who passed away while he was incarcerated. He recalled that she always wanted him to be successful in whatever he did and now, as a result, he is trying to make that a part of what he shares with his son.

According to Barry, his greatest blessing is having the opportunity to participate in the MWTP. He stated "I never would have imagined in a million years that I would have been able to obtain so much in such a short time." He says he is still in awe over the fact that he now has Certifications in Lead, Asbestos, HazMat and Mold Awareness in addition to the OSHA and construction knowledge he has been able to obtain. Barry accepted a position with a local signatory company for Roofers Local #136 in Atlanta, and began working in mid-June 2010.

About DSCEJ

Through the years, and in accordance with the objective of providing education and training, the Center has conducted numerous workshops aimed at: (1) educating community residents about toxic exposure and potential threats to their health and safety; (2) outreach activities and efforts to meet specific project goals; (3) seminars and workshops to reach targeted populations, including students at the primary, secondary and university levels; and (4) health and safety training for workers in construction and environmental remediation.



Photo provided by DSCEJ

ARRA STATISTICS

ARRA FUNDING RECEIVED

\$628,000

PEOPLE TRAINED

936

NUMBER OF COURSES

TAUGHT

53

GENDER

86% Male

11% Female

3% No response

RACE

17% African American

1% Asian

61% Caucasian

15% Hispanic

2% Native American

1% Pacific Islander

3% No Response

EDUCATION

52% High school diploma

21% Some college

10% College degree

7% Some or no high school

3% Graduate degree

AGE

11% 18 to 25 years old

31% 46 to 55 years old

26% 36 to 45 years old

15% 26 to 35 years old

15% 56 to 65 years old

1% 65 or older

TYPE OF JOBS:

Construction workers, freight drivers, ready mix drivers, pavers, water truck drivers, heavy highway equipment operators, drillers, forklift operators, pipeline workers, painters, hazardous waste workers, boom truck drivers, warehouse workers, mechanics, miners, laborers, environmental service workers, oil and gas workers, technicians, fuelers, crane operators, electricians, sheet metal workers, plasterers, plumbers, railroad construction workers, riggers, solid-waste workers, welders, inspectors, journeymen, pipefitters, maintenance workers, masons, and local government employees.

International Brotherhood of Teamsters

The International Brotherhood of Teamsters (IBT) uses American Recovery and Reinvestment Act (ARRA) grant funds to train and provide workers with the skills and certifications necessary to obtain employment on ARRA-funded projects. The ARRA funds allow the IBT to conduct outreach and train construction, warehouse, and transportation workers who are, or have the potential to be, employed on ARRA-funded projects on hazardous waste remediation sites, construction sites, and DOE remediation sites.

The IBT provides the following courses with ARRA funding: the 40-hour Initial Hazardous Waste Worker Course, the National Certification of Crane Operators (NCCCO) Crane Certification Course, the 10-hour OSHA Construction Safety Course, the 10-hour OSHA General Industry Course, the 8-hour Hazardous Waste Refresher Course, the 8-hour Forklift Safety Course, and the 8-hour Load Securement Course.

As of July 31, 2010, the IBT had trained 1,072 unemployed or underemployed workers using ARRA funds. By participating in the training, these workers qualify for employment on a variety of ARRA-funded projects. These projects include, but are not limited to: the Iron Mountain Cleanup Site; the Frontier Fertilizer Cleanup; the Sulphur Bank Mercury Mine Cleanup; the Boulder City Municipal Airport Runway Rehabilitation Project; construction of energy efficient buildings; the Savannah River DOE Site Tank 13 Area Recovery Project; the Savannah River DOE Site Salt Tank 2A and 2B Recovery; the widening of US-95; the Hanford DOE Site expansion of the Environmental Restoration Facility and operational enhancements; the Rose Valley Road project; the City of Caliente beautification projects; the Highway US-39 project; the construction of the Ivanpah Solar Plant in California; the construction of waste water treatment facilities and pollution abatement projects in Boston, MA; the Green River Road Overpass widening project; the Creech AFB expansion project; the R-MAD Nevada Test Site demolition project; and the city of Las Vegas paving projects.

IBT provides safety and health training to members of the San Pasqual Band of Mission Indians in Valley Center, CA who are employed on an energy efficiency project on their reservation.



Photo provided by IBT

Success Story

The IBT utilizes ARRA funds to provide valuable worker training to Teamster members. By participating in the training, Teamsters acquire the skills and certifications to qualify for employment on ARRA-funded projects. Prior to participating in the training, these workers were either unemployed or underemployed.

One Teamster acquired a job as a water truck driver working on a demolition project at the Nevada Test Site. The R-MAD facility was being demolished and relocated to landfills elsewhere on the Nevada Test Site. The training provided by ARRA stimulus funding qualified the Teamster for employment on the project. His hourly rate is \$33.50 an hour. His simple appreciation for the funding was expressed as follows: "I'm thankful for it, because it gave me some work."

Due to the ARRA-funded training provided by the IBT Worker Training Program, workers obtained employment on the Iron Mountain Cleanup Site; the Frontier Fertilizer Cleanup; the Sulphur Bank Mercury Mine Cleanup; the Boulder City Municipal Airport Runway Rehabilitation Project; construction of energy efficient buildings; the Savannah River DOE Site Tank 13 Area Recovery Project; the Savannah River DOE Site Salt Tank 2A and 2B Recovery; the widening of US-95; the Hanford DOE Site expansion of the Environmental Restoration Facility and operational enhancements; the Rose Valley Road project; the City of Caliente beautification projects; the Highway US-39 project; the construction of the Ivanpah Solar Plant in California; the construction of waste water treatment facilities and pollution abatement projects in Boston, MA; the Green River Road Overpass widening project; the Creech AFB expansion project; the R-MAD Nevada Test Site demolition project; and the city of Las Vegas paving projects.

The hourly wage rates of workers employed on these projects ranged from \$18.75/hour to \$47.21/hour, plus benefits.

About IBT

The International Brotherhood of Teamsters, with 1.4 million members, is one of the largest labor unions in the world. The IBT membership is diverse. The IBT Safety and Health Department, Worker Training Program provides worker safety and health training to Teamster members. Training is conducted through established training centers at Teamster local unions and Teamster training trusts.

By participating in courses funded by ARRA, Teamster members acquire the skills and knowledge to obtain employment on ARRA-funded projects in the transportation, remediation and construction industries.

The International Chemical Workers Union Center for Worker Health and Safety Education

ARRA STATISTICS

ARRA FUNDING RECEIVED
\$403,044

PEOPLE TRAINED
651

**NUMBER OF COURSES
TAUGHT**
38

CONTACT HOURS
17,446

STUDENT DEMOGRAPHICS

Participants were drawn from their local communities and were primarily young, unemployed and African American.

The International Chemical Workers Union Center (ICWUC) and its consortium partner, Coalition of Black Trade Unionists (CBTU), received \$403,044 to prepare underemployed and unemployed populations in Chicago, IL; Oakland, CA; and Anniston, AL for employment in remediation and hazardous waste industries. Program participants take part in the 24-week training that includes the anchor program, the 40-hour hazardous waste course, followed by the OSHA 30-hour general construction course, CPR, First Aid, and AED. Additional courses may be offered, depending on the program, including mold remediation, weatherization awareness, and other existing Center curriculum.

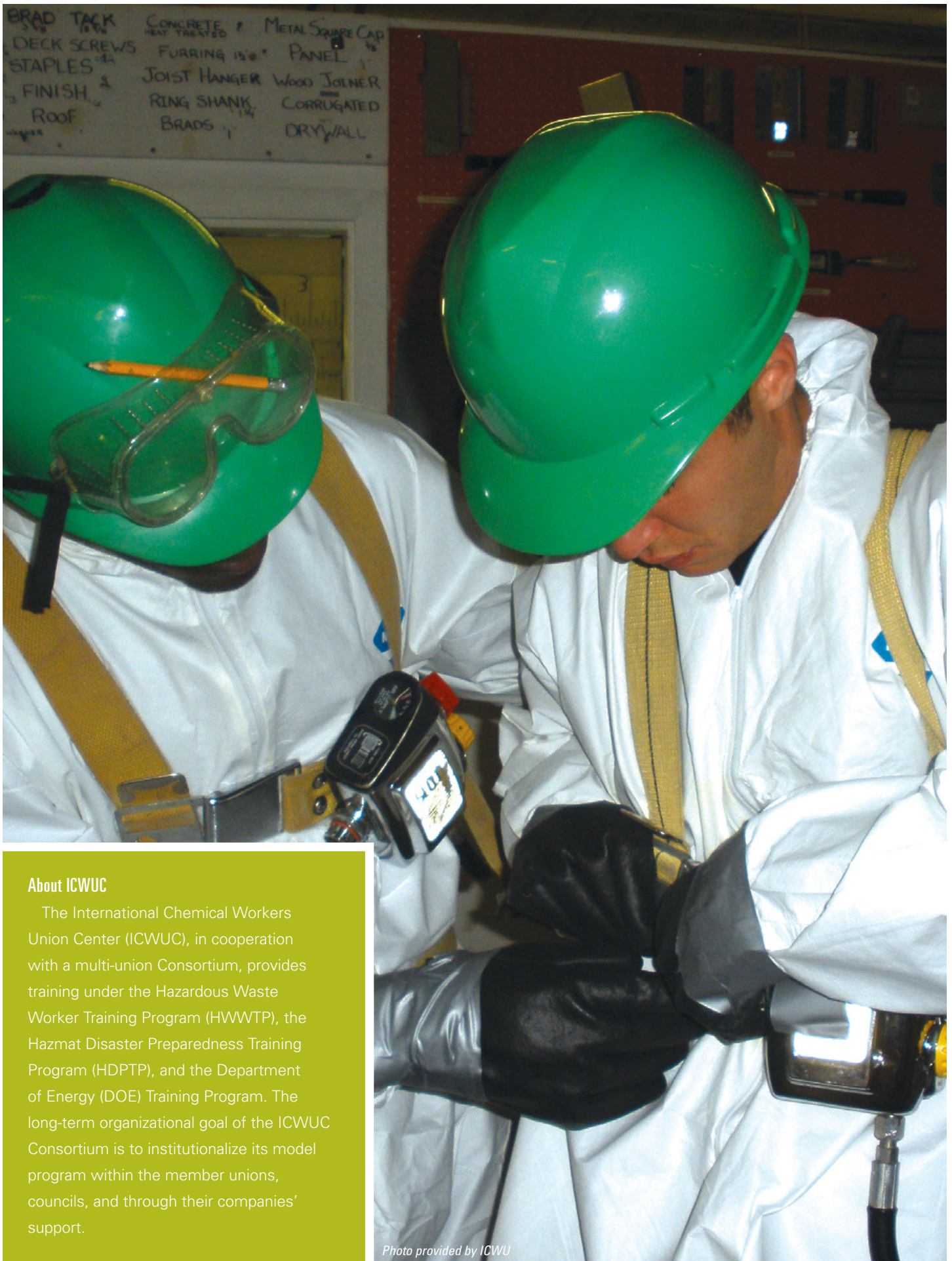
The Recovery Act funds give residents of disadvantaged communities the credentials to help them find employment in hazardous chemical and remediation jobs, while also funding unemployed trainers to deliver the training. Art Shanks, Executive Director of Cypress Mandela, Inc. which is a partner of ICWUC, describes the Recovery Funds as crucial to individuals living in inner cities, because the Funds gave them the opportunity to get off the streets and give back to the communities.

The ICWUC provides training for 38 classes, totaling over 651 students. The ICWUC estimates between one-third to one-half of the graduates obtain jobs (note: The ICWUC has not received complete information from the sites). At least 15 Anniston graduates of the program were hired to conduct cleanup in the Gulf of Mexico Oil Spill and 10 Chicago graduates are currently being interviewed by Ford Motor Company.

Moreover, as a result of the Recovery Act funds, seven site coordinators/trainers have part-time work and one full-time position was added at the ICWUC. Site Coordinators were created, and they improve upon their leadership and management skills as they carry out the ARRA programs. ICWUC training instructors and coordinators further develop their teaching skills through the ARRA-funded courses. These trainers are now part of the ICWUC team deployed for Gulf Cleanup training and other courses.



Photo provided by ICWU



About ICWUC

The International Chemical Workers Union Center (ICWUC), in cooperation with a multi-union Consortium, provides training under the Hazardous Waste Worker Training Program (HWWTP), the Hazmat Disaster Preparedness Training Program (HDPTP), and the Department of Energy (DOE) Training Program. The long-term organizational goal of the ICWUC Consortium is to institutionalize its model program within the member unions, councils, and through their companies' support.

Photo provided by ICWU

International Union of Operating Engineers National Training Fund - National HAZMAT Program

ARRA STATISTICS

ARRA FUNDING RECEIVED
\$441,000

PEOPLE TRAINED
4,195

**NUMBER OF COURSES
TAUGHT**
233

CONTACT HOURS
49,930

The International Union of Operating Engineers (IUOE) National Training Fund - National HAZMAT Program received \$441,000 to develop a green jobs and green chemistry course curriculum, a green Job Hazard Analysis (gJHA), and to train workers who are applying green concepts or implementing green technologies and alternative energy sources.

Almost 4,000 skilled trades workers, managers, scientists, engineers, and other workers were trained in the Green Chemistry and Green Jobs Awareness Course. This is an awareness-level course that introduces workers to green chemistry and jobs and aims to provide trainees with an understanding that there are still safety and health hazards associated with green industries. The curriculum also includes an introduction to green job hazard analysis, which familiarizes workers with the process of identifying and controlling hazards before they affect workers.

The success of the training is demonstrated when the knowledge and information learned is passed onto other workers or trainers. For instance, in one Job Corps program, a worker who was employed to build a green amphitheater and had taken the Green Jobs Awareness Train-the-Trainer course was eager to share what he had learned with his co-workers.

About International Union of Operating Engineers

IUOE is a progressive, diversified trade union that primarily represents operating engineers — who work as heavy equipment operators, mechanics, and surveyors in the construction industry — and stationary engineers — who work in operations and maintenance in building and industrial complexes, and in the service industries. The National Training Fund has developed a training plan to provide hazardous materials, homeland security disaster (emergency) response, OSHA, and other health- and safety-related training to its membership, its contractors, DOE site workers, government agencies, and other organizations in every region of the country.



Photo provided by IUOE



Photo provided by IUOE

LIUNA Training and Education Fund

The Laborers' International Union of North America (LIUNA) Training and Education Fund is utilizing \$800,000 in ARRA funds to meet the needs of the emerging weatherization and sustainable construction workforce through curricula development and training. Training is conducted in four locations: Chicago, IL; Seattle, WA; New York City, NY; and the Bay Area in California.

In order to meet the needs of home energy efficiency, LIUNA developed a new weatherization curriculum that targets three levels of skills: weatherization installer/technician, weatherization supervisor (crew leader), and energy auditor. The weatherization installer/technician training, which develops base competency, provides worker training on building science, sealing the building envelope, insulating and sealing ductwork, and installing insulation. This program, which embodies the principles of adult education and activity-based learning, was developed based on core competencies determined by the Department Of Energy –Weatherization Assistance Program (DOE-WAP). In developing the new curricula, LIUNA partnered with the Building Performance Institute (BPI) and the Residential Energy Services Network (RESNET) to ensure the quality of the content of the curricula.

In addition to the development and training of the new curricula on weatherization, LIUNA also provides prerequisite skills training for the program participants who have had no previous experience in the construction or environmental remediation field. These courses include safety and health, environmental awareness, lead and asbestos abatement, mold removal, general construction, math, and scaffold courses. Life skills and employability courses are also taught to better prepare program participants to obtain and retain employment.

The ARRA funds are helping the LIUNA Training and Education Fund to build a skilled workforce that will help meet the market demand for clean energy technologies.

ARRA STATISTICS

ARRA FUNDING RECEIVED

\$800,000

PEOPLE TRAINED

678

NUMBER OF COURSES

TAUGHT

44

CONTACT HOURS

16,776

About LIUNA Training and Education Fund

The Laborers' International Union of North America (LIUNA) Training and Education Fund is the training arm for the Laborers' International Union of North America. LIUNA Training creates courses, prepares trainers, and offers support to 70 affiliated training centers located throughout the United States and Canada. Training incorporates hands-on simulated exercises, classroom instruction, and advanced training technologies. By participating in the training, workers learn to work safely in highly hazardous environments. The LIUNA Training and Education Fund HWWT program trains workers who are either employed at or have the potential to work at hazardous waste sites, or who are at risk of exposure to hazardous waste on the job; the HDPTP trains Construction Craft Laborers who may be called upon to provide skilled support services on disaster sites. The LIUNA Training and Education Fund DOE program trains workers who are, or have the potential to be, employed on demolition, decommission, and decontamination projects at the DOE nuclear weapons facilities. The LIUNA Training and Education Fund will provide training that meets job and regulatory requirements and helps protect workers' health and safety during the entire remediation or emergency response job.

MetaMedia Training International, Inc.

MetaMedia Training International, Inc., an SBIR awardee, received \$46,737 in Recovery Funds to enhance its parent grant's "HazMatIQ Four Step System eLearning" program by developing additional lessons and scenarios.

The HazMat eLearning system assists in training firefighters and other emergency responders. It aims to provide comprehensive training, while simplifying the complex approach used in classrooms and textbooks. The program is a 4-6 hour online training that is driven by animations and interactive activities. This is an important course for first responders to learn how to respond to hazardous material incidents.

With the support of the Recovery Act funds, MetaMedia hired a full-time programmer and a graphic designer to assist with the animation and programming of the product. As a result, the product was successfully finished.

About MetaMedia Training, Inc

MetaMedia Training International, Inc. (MetaMedia) is a Germantown, Maryland training and education company, originally founded in 1981, with a proven history of past performance developing custom, interactive curricula and media for government, non-profits, NGOs, DOD, and global corporations. MetaMedia specializes in the design and production of innovative and engaging interactive training and information programs using proven and emerging technologies. Our programs are typically enhanced with rich media for eLearning, mLearning, and classroom-based instruction.

The professional staff possesses a considerable breadth of expertise in many areas, including instructional design, curriculum design, graphics design, animation, video and audio production, multimedia programming, DVD and Web authoring, desktop publishing, and communications. Platforms and applications for which we develop training, information, and communications programs include:

- eLearning
- mLearning
- Interactive DVD
- Instructor-led training
- High Definition video
- Podcasting, vidcasting, RSS
- Websites and content management solutions
- Collaboration tools, social networks, forums, blogs, etc.
- Interactive kiosks, exhibits, and touch screen systems

About HazMatIQ Online Four Step System

The HazMatIQ Online Four Step System is an innovative response tool that provides fire officers, hazmat technicians, firefighters and other first responders (such as law enforcement personnel) with a detailed and comprehensive training of the hazardous materials/WMD response. The program teaches responders how to make risk-based decisions on virtually any chemical incident in minutes. Hazardous Material Responders experience "information overload." This results in responders often over-analyzing available research material, causing incidents to be time-consuming, extremely costly, and labor intensive.

The training program addresses the need to teach firefighters how to safely and effectively respond to incidents involving hazardous materials or WMDs in a method that simplifies the overly-complex approach currently being taught in classrooms and textbooks across the United States.

HazMatIQ has developed a simple system incorporating a series of easy-to-understand charts, which enable responders to safely and quickly assess risk and make a safe and proper decision on how to mitigate an incident. This system coaches responders through the process in a way that virtually eliminates "information overload."

The HazMatIQ patented four step flowchart is a Risked-Based Response System that guides the responder through a simple four step process.

Step 1. Chemical Size-up based on chemical name. This size-up identifies hazards, helps in choosing appropriate detection equipment and selection of PPE

Step 2. Chemical Research using the NIOSH Pocket Guide to verify the size-up information. This research is based on seven chemical, physical, and toxicological properties

Step 3. Select appropriate detection equipment based on the hazards ascertained during Steps 1 & 2

Step 4. Choose the correct level of protection (PPE) based on the hazards of the product

The screenshot displays the HazMatIQ software interface, which is designed for hazardous materials response training. It features a top navigation bar with tabs for elements: Boron, Carbon, Nitrogen, Oxygen, and Fluorine. Below this, a horizontal bar indicates the user's position relative to a 'Line', with 'Above the Line' in red and 'Below the Line' in blue. The main content area is divided into two sections: Lesson 1 - Introduction and Lesson 5 - Naphthalene diisocyanate and CHAR. Lesson 1 includes a HazMatIQ logo, contact information (800-518-9895, www.HazMatIQ.com), and a diagram of a person in a red shirt. Lesson 5 provides detailed information for Naphthalene diisocyanate, including its formula ($C_{10}H_6(NCO)_2$), CAS# (3173-72-6), RTECS# (N09600000), and IDLH (N.D.). It also lists synonyms, exposure limits (NIOSH REL: TWA 0.040 mg/m³ (0.005 ppm), C 0.170 mg/m³ (0.020 ppm) [10-minute]), physical and chemical properties, and personal protection/sanitation recommendations. A diagram of a person in a blue shirt is shown on the right. The interface includes a search bar, a list of elements, and a 'PART - A B' indicator.

Lesson 1 - Introduction

HazMat IQ
800-518-9895
www.HazMatIQ.com
Chemical, Hazmat & Emergency / WMD Training
OVER 30 YEARS OF HAZMAT RESPONSE EXPERIENCE

Lesson 5 - Naphthalene diisocyanate and CHAR

Naphthalene diisocyanate	
Formula: $C_{10}H_6(NCO)_2$	CAS#: 3173-72-6
Conversion: 1 ppm = 8.60 mg/m ³	RTECS#: N09600000
IDLH: N.D.	
DOT:	
Synonyms/Trade Names: 1,5-Diisocyanatonaphthalene; 1,5-Naphthalene diisocyanate; 1,5-Naphthalene ester of isocyanic acid; NDI	
Exposure Limits:	
NIOSH REL: TWA 0.040 mg/m ³ (0.005 ppm)	
C 0.170 mg/m ³ (0.020 ppm) [10-minute]	
A PEL: 0.170 mg/m ³ (0.020 ppm) [10-minute]	
Physical Description: White to light-yellow, crystalline flakes	
Physical Properties	Personal Protection/Sanitation (see Table 2):
Boiling Point: 210.2 °C (405 °F)	Skin: Prevent skin contact
Melting Point: 311 °F	Eyes: Prevent eye contact
Density: 1.21 g/cm ³	Wash skin: When contam
Flash Point: 111 °F	Remove: When wet or contam
Freezing Point: 75 °F (21 °C)	Change: Daily
Volatility: 0.003 mmHg	
Stability: Stable	
Reactivity: None reported	
Exposure Routes, Symptoms, Target Organs (see Table 5):	Respirator Recommendations (see Tables 3 and 4):
R: Inh, Ing, Con	NIOSH
E: Irrit eyes, nose, throat; resp sens, cough, pulm secretions, chest pain, dysp, asthma	0.05 ppm: Sa*
Eyes, resp sys	0.125 ppm: Sa/Cl*
	0.25 ppm: ScbaF/SaF
	1 ppm: SaF,Pd,Pp
	5: ScbaF,Pd,Pp/SaF,Pd,Pp/AScba
	Escape: GmFOwScbaE
	First Aid (see Table 6):
	Eye: Irr immed
	Skin: Soap wash immed
	Breath: Resp support
	Swallow: Medical attention immed

Midwest Consortium for Hazardous Waste Worker Training

ARRA STATISTICS

ARRA FUNDING RECEIVED
\$620,494

PEOPLE TRAINED
2,114

COURSES TAUGHT
156

CONTACT HOURS
15,772

The Midwest Consortium for Hazardous Waste Worker Training, based at the University of Cincinnati, received ARRA funding in the amount of \$620,494 to provide training for hazardous waste site cleanup workers and to train local workers who are unemployed or underemployed to conduct weatherization activities in Indiana, Illinois, Kentucky, Michigan, Ohio, Tennessee, and Wisconsin.

In order to prepare individuals for weatherization jobs, the Midwest Consortium developed the weatherization safety handbook, which educates weatherization course participants about the safety and fundamentals involved in weatherization, including air sealing, insulation, and safety procedures when working around lead and asbestos. Thus far, over 473 people received weatherization training provided by the Consortium.

The demographic of the trainees under the ARRA funds is different from that of the participants recruited under the parent grant. The Kentucky Community and Technical College, a consortium member, partnered with YouthBuild to recruit under- and un-employed individuals for the training. YouthBuild also seeks employment for the trainees.

The Recovery Act funds provided other successful opportunities to individuals. For example, the Greater Cincinnati Occupational Health Center (GCOHC), a Consortium member, is able to work closely with the



Photo by Stacy Smith

About Midwest Consortium for Hazardous Waste Worker Training

The Midwest Consortium provides training under the Hazardous Waste Worker Training Program (HWWTP) to workers who may be exposed to hazardous materials while performing jobs covered by the OSHA HAZWOPER standard in nine states of the Midwest. The Consortium's specific aims are as follows: to serve the needs of the region through interactive, hands-on training developed to meet the needs of adult learners employed in jobs covered by HAZWOPER; to document the change in and retention of knowledge and skills as a result of training; to evaluate the impact of training of residents after their return to the workplace; to provide training in communities where hazardous materials exposures may occur; and to fully integrate advanced training technologies into program content and delivery.

Cincinnati Labor Agency for Social Services to train individuals in a pre-apprenticeship construction industry program. Twenty-four graduates have successfully completed the weatherization training to the pre-apprenticeship program, also funded by Recovery Act funds and designed to prepare trainees to enter the construction field. In addition, 14 trainees have been employed since the training, 34 have retained their employment, 28 have been accepted into a pre-apprentice program for construction, and six have been hired by construction contractors.

As a result of the training supported by the Recovery Act funds, some participants of the program continue on to receive information about Adult Basic and Literacy Education (ABLE) Programs and obtain their GED in order to improve their work opportunities.



Photo by Stacy Smith

Success Story

The project manager for the Weatherization Grant at the Greater Cincinnati Occupational Health Center (GCOHC) gives short presentations to various groups. One presentation was given to "Venice on Vine," which is an employment program offering paid, on-the-job, food-service training to Cincinnati inner-city residents. Two of the participants, who later attended the weatherization training, continued on to obtain their GED after receiving information from the Midwest Consortium about Adult Basic and Literacy Education (ABLE) programs. Two other participants have enrolled in a pre-apprenticeship program for the Building and Construction Trades that GCOHC referred them to after they completed the weatherization training.



Photo by Stacy Smith

The New England Consortium

ARRA STATISTICS

ARRA FUNDING RECEIVED
\$373,270

PEOPLE TRAINED
482

**NUMBER OF COURSES
TAUGHT**
33

CONTACT HOURS
5,192

STUDENT DEMOGRAPHICS

Over 100 of the students that TNEC has provided training for under this program come from four job training programs drawing the majority of their students from the cities of New Bedford, Holyoke/Springfield, and Lowell/Lawrence. Out of 351 cities and towns in the state of Massachusetts, these communities rank 346, 345, 348, 333, and 350 in per capita income. The vast majority of students from these programs are Hispanic, Portuguese, Cape Verdean and Asian. Most are educationally and economically disadvantaged youth and adults, low-income, low-skilled and low-wage workers who come from underrepresented populations of immigrants, returning veterans and those with language/cultural barriers.

GENDER
7% Female
93% Male

RACE/ETHNICITY
10% African American
7.5% Latino/Hispanic
1.5% American Indian
1% Asian
78% White
3% Other

The New England Consortium (TNEC) used its ARRA funds, \$373,270, to provide safety and health training to underemployed, unemployed, or recently laid-off workers for work in the Recovery Act-supported hazardous waste cleanup projects, green energy sector, transportation, and construction projects.

As of October 2010, TNEC trained over 482 underserved workers, mostly inner-city unemployed and underemployed workers in 33 courses. Most trainees were newly hired employees or public employees working on ARRA-funded projects who would otherwise have lost their jobs. These include employees who work in transportation and construction, water treatment and resources, municipal road, sewer and highway projects, private sector green energy start-up firms, and weatherization and environmental technology. For example, one graduate of the JFYNetworks weatherization program in Lowell was an unemployed painter who now works for Conservation Services Group (CSG) as an air sealing technician. CSG is the leading weatherization company in eastern Massachusetts and the company is grooming the graduate to become an energy auditor.

The ARRA funds also help to support the expansion of the green sector and to ensure an emphasis on employee health and safety. TNEC developed a new OSHA 10 + Plus course that includes the standard 10-hour OSHA construction course, with four hours of additional instruction on topics related to the “green” construction industries.

About the New England Consortium

The New England Consortium (TNEC) is the New England region’s model worker health-and-safety-training organization. Since 1987, TNEC has provided dynamic hands-on, participatory health and safety training. With simulated work tasks and mock incidents, students gain a better understanding of worksite hazards and how to properly respond in an emergency situation. The consortium is based at the University of Massachusetts Lowell and includes five worker health and safety advocacy groups: The Massachusetts Coalition for Occupational Safety and Health (MassCOSH), the Rhode Island Committee for Occupational Safety and Health (RICOSH), the Connecticut Council for Occupational Safety and Health (ConnectiCOSH), the Western Massachusetts Coalition for Occupational Safety and Health (Western MassCOSH), and the New Hampshire Coalition for Occupational Safety and Health (NHCOSH). The New York State Civil Service Employees Association (and AFSCME local) started working with TNEC in August 2010 thanks to a new grant from NIEHS.



Other successes that are a direct result of the ARRA funds include the following: the opportunity for 23 environmental and worker health and safety activists to engage in preparation of trainers for a new curriculum for green chemistry sessions; the hiring of a full-time trainer, a half-time project administrator, and another half-time trainer; the retention of employees; and the hiring of two student summer interns to support research in environmental public health. This training has resulted in three Green Chemistry trainings in Connecticut and another in Massachusetts for a current total of 65 trained occupational and environmental health activists.

Clean Water Action is one of the organizations directly benefiting from the Recovery Act-funded Green Chemistry training. The staff at the organization receive the training first and then conduct Green Chemistry workshops for citizen activist organizations. The organization has received positive feedback from participants in the workshops. In one instance, Clean Water Action provided the workshop for the Green Justice Coalition — a coalition of community organizations, labor unions, environmental organizations and other allied organizations — to introduce a new element into their approach to address worker safety and health.

TNEC training provides people with new opportunities, new skills, and new hope. On a trip to see how the Recovery Act funds were being utilized, the Governor of Massachusetts, Deval Patrick, stated that trainees “have a confidence about the future that comes from the fact that they, as well as we, are investing in that future.”

Success Story

Amanda Murray and **Alexander Asiedu Gyebi**, a junior and senior respectively in the University of Massachusetts Lowell’s (UML) Department of Community Health and Sustainability are the recipients of a student research supplemental grant awarded to Dr. Craig Slatin. Ms. Murray and Mr. Gyebi are research interns on two projects conducted by the UML Department of Work Environment faculty and researchers – Drs. Susan Woskie, Susan Shepherd, and Maria Brunnette. Both of these research projects address the health and safety needs of building trades workers. The project run by Drs. Woskie and Shepherd is studying silica dust and noise exposures on construction sites. Dr. Brunnette is studying innovative and effective ways of providing health and safety communication and education to Latino construction workers. The students are conducting exposure sampling and analysis and interviewing workers and contractors about health and safety conditions. Both students are also participating in the national Occupational Health Internship Program (OHIP). Dr. Slatin noted, “I am delighted that UMass Lowell is helping President Obama to advance a renewed and sustainable economy by providing students with research to encourage their careers in advancing environmentally sound and healthy and safe jobs.”

Success Story

Tim Allen, a laid-off construction worker and father of three children, is one of the 20 students in a job-training program in Lowell, MA, designed to prepare workers in the field of weatherization of residential buildings, or “Energy Efficiency Technician Training.” Conducting the training is a firm known as Conservation Services Group and the New England Consortium, which specializes in worker health and safety training. For Allen, who has been unable to find work, training in a new field has given him hope. “I really want to get back out there,” said Allen. “This is a growing field, so I’m very optimistic. It’s not easy,” he said. “You need to think of the house as a whole,” he advised. “And it’s not about making sure the house is air-tight. It needs to breathe. There’s also a lot of math involved.” The training has given laid-off workers such as Allen new hope for the future.

The New Jersey/New York Hazardous Materials Worker Training Center

ARRA STATISTICS

ARRA FUNDING RECEIVED
\$400,000

PEOPLE TRAINED
280 (28 MWTP and 251
HWWTP Students)

**NUMBER OF COURSES
TAUGHT**
31

CONTACT HOURS
14,198

STUDENT DEMOGRAPHICS
Underemployed,
unemployed, building
superintendents and
building maintenance
workers and trainers of
supers; health and safety
trainers of construction
trade students

The New Jersey/New York Hazardous Materials Worker Training Center, based at the University of Medicine and Dentistry of New Jersey (UMDNJ), uses its Recovery Act funds to provide safety and health training to workers engaged in cleaning up hazardous waste sites in New York and New Jersey. The Consortium received \$400,000 to provide training in various courses including OSHA 40-hour hazardous waste, OSHA 10-hour general construction, asbestos abatement, and lead abatement.

In response to the Gulf of Mexico oil spill and with the support of the Recovery Act funds, UMDNJ and its partner, Hope Community Outreach Inc., a non-profit community organization, provided health and safety training to under-employed and un-employed residents in Camden, NJ. Course participants were residents of Camden, including Whitman Park, where Hope's community center is located. Whitman Park has high rates of unemployment. Sylvester Servance, administrator of the Hope Community Outreach Center, indicates that the Recovery Act funds are excellent at providing an opportunity for previously under- and un-employed people to obtain technical skills and discipline to fully prepare them for the job market.

Three classes were held at the Hope Community Center. Trainees from the first class received jobs with Neuber Demolition and Environmental Services in Pennsylvania. The company was thrilled about the graduates' skills and discipline. The graduates are extremely successful within the company, with one graduate even being promoted to a supervisor position. Trainees from the second class participated in classroom instruction and field training, focusing on oil spill cleanup in preparation for employment by a firm to clean up the beaches and other areas polluted by the Gulf Coast oil spill. As a result of the training, 23 people were employed to clean up the oil. These workers earn from \$18 to \$25 an hour, and the work is guaranteed for eight months. The Hope Community Outreach Center also worked with Sovereign Bank and the City of Camden to provide graduates with the opportunity to work on rehabilitating abandoned buildings in Camden to make them marketable. Mr. Servance indicates that these successes would not have happened without the Recovery Act funds.

Other consortium partners, such as the New York Committee for Occupational Safety and Health and the New York District Council of Carpenters, use the supplemental funding to provide underserved workers in hazardous waste cleanup and green jobs initiatives.

Success Story

The training in Camden has led to job opportunities in environmental cleanup and remediation as well as apprenticeships in area unions. The Hope Community Outreach Center has identified contractors that are conducting asbestos and lead removal jobs and who will employ those trained by the program. Additionally, the Hope Center works with Sovereign Bank to upgrade credit scores of trainees, so they can apply for mortgages. Trainees will be able to purchase homes that have been rehabilitated by community residents and reduce the economic burden on individuals (mortgage payments would be about 50% of the cost of renting similar properties).

About New Jersey/New York Hazardous Materials Worker Training Center

The New Jersey/New York Hazardous Materials Worker Training Center (NJ/NY HMWTC) provides training under the Hazardous Waste Worker Training Program (HWWTP), the Hazmat Disaster Preparedness Training Program (HDPTP), and the Minority Worker Training Program (MWTP). For each program area, the NJ/NY HMWTC has established relationships with the target populations and represents unions, academia, labor, and private and public sectors. A major objective of the Center is to prevent and reduce disability, morbidity, and mortality due to potential risks during hazardous waste operations and emergency response through effective health and safety training.

OAI, inc.

OAI, inc. received \$482,000 in ARRA funding to provide safety and health training for newly hired and retained workers in construction, weatherization, environmental remediation and debris removal in Illinois, Louisiana, Pennsylvania, Maine and Texas.

Under the HWWTP, OAI uses its Recovery Act funds to provide additional and necessary hazardous waste training to workers, some of whom were underemployed or unemployed. Workers receive initial training on the new EPA-mandated 8-hour Renovation, Repair and Paint (RRP) course; 10-hour and 30-hour OSHA general construction courses; and lead, asbestos, and mold abatement courses. As a result, program participants are prepared for work on renovation, painting, repairing, general construction, weatherization and deconstruction. As of July 31, 2010, 1182 people have been trained in the HWWTP.

The Recovery Act funds also enable many small businesses to compete in the marketplace by allowing these businesses to direct money that would have been spent on the required training to other areas of need, such as purchasing of supplies, equipment or hiring additional staff. For example, Insulation Technologies in Louisiana, an asbestos abatement contractor, has diversified into other areas such as mold remediation and hazardous materials response and mitigation, including the Gulf of Mexico oil spill.

This supplemental funding fills a critical gap in safety training of underserved workers who are most in need of training and who are covered under OSHA 29 CFR 1910.120, USEPA 40 CFR 65, and USDOT 49 CFR 171-1771. These workers are exposed to hazardous materials during cleanups, large-scale renovation, construction, demolition, deconstruction, Brownfields-type redevelopment and public works projects, as well as in the extensive commercial and residential weatherization projects resulting from Recovery Act funding.

Largely due to lack of education and training and/or minimal English proficiency and unfamiliarity with U.S. culture and workplace safety precautions mandated by law, these individuals are more likely to be exposed to workplace health hazards (particularly lead, asbestos and mold) than the mainstream population, thus underscoring the need for the training.

One example of how OAI's ARRA-funded HWWTP training has successfully helped these workers is OAI's Chicago program:

In late 2009, the City of Chicago's Department of the Environment received federal stimulus Community Development Block Grant (CDBG-R) funds that were awarded to local non-profits to create transitional green jobs programs for underserved and reentry populations. OAI has provided OSHA 10, Hazard Awareness, and Lead RRP training to the following constituents of CDBG-R award recipients:

- 210 formerly incarcerated individuals employed by the [Delta Institute](#) and [Safer Foundation](#) to conduct deconstruction of public and commercial buildings in Chicago;
- 58 formerly incarcerated individuals employed by [St. Leonard Ministries](#), [Leed Council](#) and [Inner City Muslim Network](#) who will work on commercial and residential energy retrofits;
- 100 street entry-level cleanup and construction workers employed by [Breaking Ground](#).

By receiving HWWT-ARRA safety training from OAI, beneficiary organizations are able to redirect funds for mandated training to other critical services.

Safe work practices and knowledge gained from this training will have direct, long-term, positive health impacts on affected workers beyond the life of this award.

In addition to the 2.25 FTEs supported by this award for new/retained OAI staff, an additional 1.4 FTE has been generated among OAI HWWT-ARRA Consortium partners nationwide.

The OAI Consortium's Minority Worker Training ARRA Supplemental award provides under- and un-employed minority residents of Dallas, TX and Chicago, IL with the requisite skills to secure sustainable employment in

ARRA STATISTICS

ARRA FUNDING RECEIVED
\$482,000

PEOPLE TRAINED
1,192 (10 MWTP and
1,182 HWWTP Students)

**NUMBER OF COURSES
TAUGHT**
92 (17 in the MWTP)

STUDENT DEMOGRAPHICS
Underemployed,
unemployed, middle-
class and low-income

TYPE OF WORK TRAINED
Commercial,
Infrastructure,
Industrial, and Heavy
Highway Construction;
Weatherization;
Renovation, Repair and
Painting; Environmental
Remediation;
Deconstruction.

**STUDENT DEMOGRAPHICS
(MWTP)**
6 African Americans
2 Hispanics
2 Others

green jobs, environmental remediation, green construction and transportation. In partnership with OAI, Central Dallas Ministries enrolled 10 trainees in an 8-week Build4Success training program focused on training for employment opportunities in green construction and transportation in the Dallas area. Trainees received OSHA 30-hr for Construction, First Aid/CPR, and “green building” practices, such as introduction to green building, water and energy usage, LEEDS building requirements, green building science principles, and energy efficiency. The Recovery Act also funded training for industrial and heavy highway construction in the Dallas and Fort Worth areas. This training included uses of slings and common rigging hardware, ropes, chains, hoists, loaders, cranes, inspection techniques and basic load-handling safety practices, and proper use of American National Standards Institute (ANSI) hand signals. These technical skills were combined with Soft Skills training including: communication skills; building relationships with supervisors and co-workers; resolving conflict; teamwork; managing stress; critical thinking and problem solving. This comprehensive training opened the doors for underserved people and allowed them an opportunity to participate in the job surge created by ARRA funding. In Dallas, the ten trainees who enrolled in the program graduated, and nine of the ten graduates have been placed in jobs. Some of the graduates are working on a new “deck park” in downtown Dallas, creating a “green bridge” across a freeway and providing an oasis amid the glass and concrete of downtown Dallas.

In Chicago, OAI will enroll 15 trainees in a three-week Weatherization Worker training component, Lead Repair, Renovation and Painting, OSHA 10 hour Construction, and Asbestos and Mold Awareness courses to prepare workers for weatherization, construction, and environmental technician occupations. OAI staff works directly with OTS Energy Solutions, a local minority-owned contractor that specializes in energy efficiency and conservation training and consults with contractors wishing to enter the weatherization industry. This partnership provides trainees with direct connections to employers in the energy conservation and efficiency industries.

The ARRA funds also benefit OAI and CDM, by helping OAI build internal and consortium capacity. For instance, the funds helped OAI to prepare for the EPA-mandated Renovation, Repair, and Painting rule. Existing employees were retained and additional employees (a program coordinator, a program assistant, a financial assistant, and training instructors) were hired to improve capacity. The ARRA funding provides the opportunity for worker training programs to assist additional workers who have obstacles, such as ex-offenders, to gain the necessary skills to gain employment.

Success Story

Cleto Villafana was born in Mexico and came to Dallas, Texas with his family when he was 15 to find a better life. He struggled initially with poor English skills but he wasn't going to let anything as “minor” as language get in his way of achieving the success he sought. Mr. Villafana applied for the ARRA Build4Success Worker Training program made possible through OAI, inc. and their partnership with the WorkPaths department at Central Dallas Ministries. Although lacking confidence at first, Mr. Villafana completed the training through hard work and determination. One of WorkPaths employer partners who was interested in hiring Mr. Villafana requires new hires to have a high school diploma or GED. Mr. Villafana had neither of these. Due in large part to his strong performance during his training, his compelling willpower, and the recommendation from the WorkPaths Director, the contractor agreed to hire him with the condition he get his GED after he was hired. WorkPaths arranged for Mr. Villafana to start GED classes within a few weeks after graduation from the ARRA training, and he enrolled in additional ESL classes on his own. He will complete his GED in the summer of 2010, and the contractor is very pleased with him.



Photo provided by OAI, inc.



Photo provided by OAI, inc.



Photo provided by OAI, inc.

About OAI, inc.

OAI, inc.'s mission is to create an environment in which all people can access education, training and employment that will allow them to sustain and enjoy safe, secure and fulfilling lives. The long-term objective of the OAI Consortium is to prevent work-related harm by training workers on how to best protect themselves, their communities and the environment. OAI's programs provide training for both currently employed workers and unemployed or underemployed individuals who are in need of job skills and critical worker health and safety awareness.

SEIU Education and Support Fund

ARRA STATISTICS

ARRA FUNDING RECEIVED
\$265,136

PEOPLE TRAINED
223

**NUMBER OF COURSES
TAUGHT**
11

CONTACT HOURS
1,258

STUDENT DEMOGRAPHICS
Healthcare workers, from
registered nurses to
environmental services
workers

Using the \$265,136 received from the Recovery Act, Service Employee International Union (SEIU) Education and Support Fund provides safety and health training for healthcare workers and environmental service workers (EVS) in healthcare settings.

In response to the H1N1 flu outbreak in 2009, SEIU provides training to healthcare workers on how to better prepare for and protect themselves and others against the flu virus. Trainings were held in Rhode Island and California. These Recovery Act-funded Train-the-Trainer courses enabled participants to become valuable resources for their workplace as they are able to share important H1N1 information with their co-workers. Two coordinators/trainers for the training workshops indicated that these courses were essential to saving lives and preventing the H1N1 epidemic from spreading.

Two training courses were held at a Rhode Island hospital for approximately 50 local labor union and management employees. Both training sessions were successful at facilitating discussion among trainees to identify problems and solutions within their work environment. As a result, new policies to protect the workers' health were developed and implemented. Among these policies is the H1N1 leave policy for the hospital. This new policy allows healthcare workers to take sick leave for one week if they have the flu, without any penalty from management. In addition, the hospital adopted a policy that disallowed EVS entry to known or suspected H1N1 contaminated rooms within 3 hours after the patient leaves. This training empowers the EVS workers by providing them with essential safety and health knowledge to protect themselves and their families and co-workers. For instance, a dietary worker who took the course was able to protect his family by learning where to get information when his wife contracted H1N1. Several workshops were also held across California to teach participants how to protect self and others during an H1N1 outbreak and why and how to properly use respirators. For example, a representative who took the course in California was able to educate the hospital manager and human resource personnel on H1N1 protection. As a result, fit testing of respirators was conducted and enough personal protective equipment was made available for the entire staff.

Furthermore, in coordination with a Department of Labor (DOL) Green Jobs grant, SEIU assists with the development of a green healthcare EVS training curriculum. The curriculum consists of six 2-hour modules for EVS workers on basic green activities inside hospitals. SEIU currently provides Train-the-Trainer courses to workers so that they can become instructors on various green topics. One of the aims of this curriculum is to empower EVS workers and provide them with career advancement opportunities.

In order to implement these trainings, SEIU also utilized ARRA funds to hire a part-time nurse to help teach and coordinate the H1N1 courses and a contractor to coordinate the Green EVS projects in New York.

*...providing essential safety and health
knowledge to protect themselves, their
families and co-workers.*



Photo provided by SEIU



Photo provided by SEIU



Photo provided by SEIU



Photo provided by SEIU

Success Story

As a result of two training courses for labor and management held at the Rhode Island hospital, new policies to protect the health of the workers during the H1N1 pandemic were developed and implemented. Among these was a leave policy which allowed healthcare workers to take one week of sick leave for the flu, without penalty from management. In addition, the hospital adopted a policy requiring EVS workers wait 3 hours after the patient leaves to clean the room of known or suspected H1N1 patients. This training empowers the EVS workers by providing them with essential safety and health knowledge to protect themselves, their families and co-workers.

About SEIU

SEIU is a labor union that represents over 2.2 million workers in three key service industries: healthcare, public service, and property services. The SEIU Education and Support Fund targets acute-care hospital employees, road maintenance workers and wastewater treatment operators with chemical emergency responsibilities at their facilities. The SEIU Education and Support Fund's Hazardous Waste Worker Training Program provides high-quality hazardous materials awareness and operational response training. Through the unique access provided to the Program by the national network of local unions in the SEIU, the Program seeks to prevent acute and chronic injury and illness among workers exposed to hazardous materials and waste in emergency situations.

United Steelworkers Charitable and Educational Organization

ARRA STATISTICS

ARRA FUNDING RECEIVED
\$720,250

**NUMBER OF COURSES
TAUGHT**
43

PEOPLE TRAINED
205

CONTACT HOURS
13,914

STUDENT DEMOGRAPHICS

At-risk construction workers, low-income and minority workers who were previous under- and un-employed, or recently laid off

The United Steelworkers (USW) Charitable and Educational Organization received \$720,250 of the Stimulus funds to provide safety and health training for at-risk construction workers and low-income and minority workers who were previous under- and un-employed, or recently laid off.

In partnership with the A. Philip Randolph Institute, the Housing Authority of the City of Pittsburgh, and the Urban Green Job Alliance, the Tony Mazzocchi Center provides worker training to low-income residents for public housing improvement jobs. Students are trained in the OSHA-30-hour course, 40-hour HAZWOPER course, mold remediation, green chemistry, weatherization, and carbon footprint. The weatherization course curricula, created under the Recovery funds, help improve public housing by making it more energy efficient and by improving the health and safety of homes. To date, the Pittsburgh program has graduated five groups of trainees. USW also piloted a training program in Michigan modeled after the Pittsburgh program. Additionally, three OSHA 10-hour construction classes, one 40 hour HAZWOPER course and one 8 hour HAZWOPER refresher course were taught to at-risk construction workers engaged in highway and bridge construction with funds from the federal stimulus and recovery program.

Of the 99 people who graduated from the Pittsburgh program, 39 workers have received jobs, primarily in the construction and maintenance trades. Several graduates were placed in weatherization jobs. The ARRA funds helped transform the lives of low-income residents by providing them with the skills and knowledge necessary for long-term employment.

USW has also used ARRA funds to create a newsletter and blog in order to proactively communicate with its members and interested stakeholders. Through this vehicle, USW shares success stories and challenges from trainees, and keeps members and interested stakeholders up-to-date on health and safety issues and information.

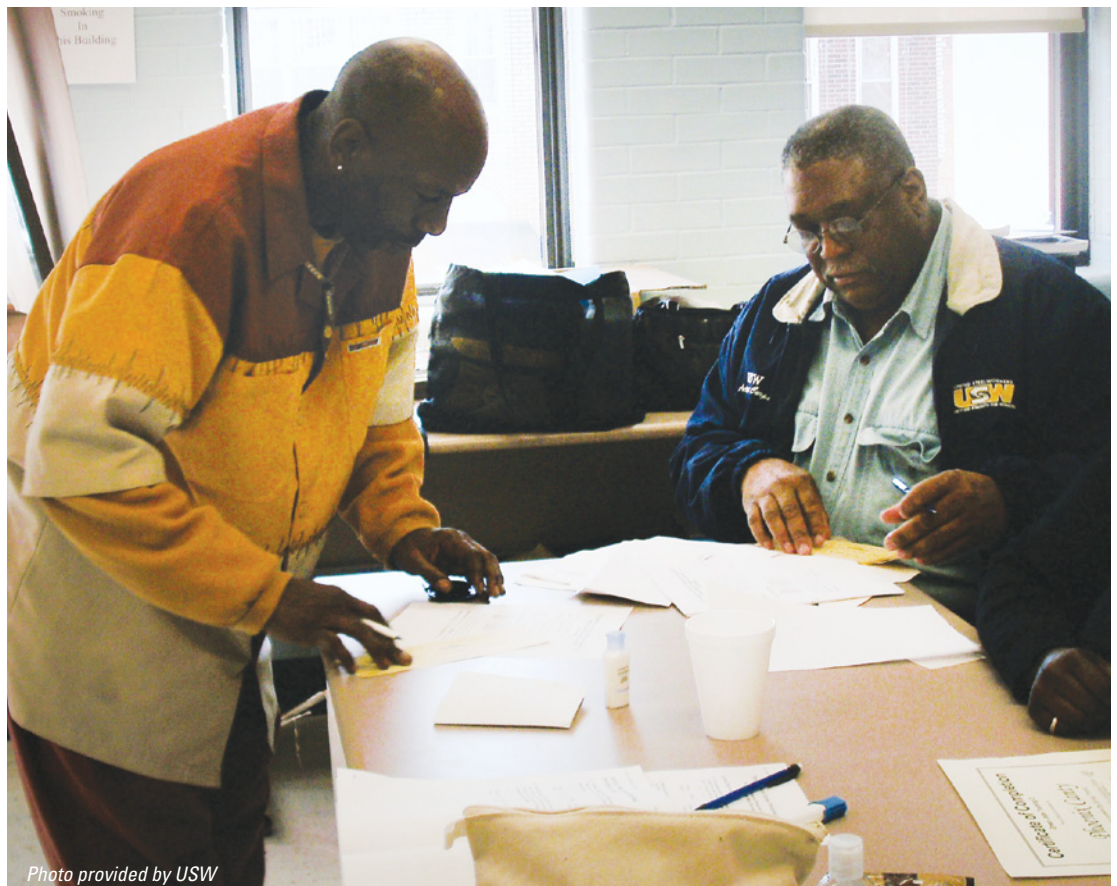


Photo provided by USW



Photo provided by USW

Success Story

Annette Johnson and **Stacey Robinson**, two young women who were unemployed and residents of Public Housing graduated from the program in Pittsburgh, PA. They were recognized as peer leaders and began helping as trainer assistants. In April, they completed the TMC Train-the-Trainer courses and are now teaching new trainees in the Pittsburgh training program.

About USW

USW represents workers in the paper, petroleum, chemical, rubber, plastics, and primary metals industry groups, all of which contain large quantities of hazardous waste and experience large quantities of toxic releases. USW also plays a key role in addressing man-made and natural threats to large chemical facilities. USW has established health and safety training programs for more than 200 national and site worker-trainers who recruit and train workers. The Tony Mazzocchi Center, the training branch of USW, provides training under the Hazardous Waste Worker Training Program (HWWTP), the Hazmat Disaster Preparedness Training Program (HDPTP), and the DOE Nuclear Workers Training Program. The long-term objective of the Consortium is to prevent work-related harm by training workers on how to best protect themselves, their communities, and the environment.

Western Region Universities Consortium

ARRA STATISTICS

ARRA FUNDING RECEIVED
\$425,000

PEOPLE TRAINED
596

**NUMBER OF COURSES
TAUGHT**
36

STUDENT DEMOGRAPHICS
12.1% White (non-Hispanic)
37.3% Black (non-Hispanic)
37.7% Hispanic
5.0% Asian/Pac Islander
3.4% American Indian
4.4% Other/missing

GENDER
81.3% Male
16.3% Female
2.4% Other/missing

CURRENTLY EMPLOYED
33.0% Yes
67.0% No

Using the Recovery Act funds, the Western Region Universities Consortium (WRUC) developed curricula and trained underserved workers in the emerging green jobs field. Three consortium members—the University of California at Los Angeles (UCLA) Labor Occupational Safety and Health Program (LOSH), the University of California (UC) Berkeley Labor Occupational Health Program (LOHP), and the University of Washington’s Northwest Center for Occupational Health and Safety—received \$425,000 to develop new worker training on health and safety hazards and benefits related to green buildings and green chemistry.

The three universities worked together to develop the green buildings curricula and now conduct training for various populations. In particular, by partnering with local pre-apprenticeship programs and work source centers, WRUC members are able to extend training to minority and low-income under- and un-employed workers in Los Angeles, the San Francisco Bay Area, and Seattle.

The training opportunity made available by the Recovery Act funds gives inner-city individuals in South Central Los Angeles, and in other communities challenged by poverty and crime, the chance to change their lives in a positive manner. Graduates have transformed their lives as their newly gained skills give them confidence and a new sense of empowerment. For instance, 75% of the graduates from WRUC’s training partner, YouthBuild in Los Angeles, are placed in jobs or are pursuing higher education.

WRUC’s green building training enables workers to identify and respond to potential hazards in green construction and retrofit jobs. Some graduates of WRUC green building courses are already working in jobs funded by the Recovery Act. For example, approximately 20 students from the Seattle Vocational Institute Pre-Apprenticeship Program are placed in ARRA-funded projects, such as highway projects with the Washington Department of Transportation.

WRUC’s green chemistry curriculum focuses on identifying workplace chemical hazards and controlling exposure, as well as identifying safer substitutes that are less hazardous to workers and the environment. LOSH and LOHP jointly developed the curriculum and carried out this training in English and Spanish with oil refinery workers, car wash workers, and others who handle chemicals as part of their jobs.

To date, WRUC members have taught 596 students in 36 courses, with more classes scheduled in the coming months.

In addition to curricula development and training, WRUC is developing an interactive eTool on green building health and safety. This tool will allow users to better understand general principles of green buildings and to become familiar with possible hazards and risks that can be found at the job site.

WRUC is also benefiting directly from the Recovery Act, because consortium members had opportunities to better research and understand safety and health issues within the emerging green jobs sector. WRUC has built lasting relationships and partnerships with pre-apprenticeship organizations. In addition, with the support of the ARRA funds, LOSH filled two full-time positions, LOHP hired one part-time support staff and retained one coordinator, and the University of Washington hired a contractor. WRUC’s training partners also built internally as they retained and hired new staff.



Photo provided by WRUC

Success Story

Masoud (Mo) Mohamed completed the Seattle Vocational Institute (SVI) Pre-Apprenticeship Construction Program (PACT) in April 2010. Mo, a native of Tanzania, immigrated to the U.S. following a traumatic series of events in which numerous members of his family were brutally murdered in political violence when his father was targeted for opposing government policies.

When he came to the U.S., Mo was an angry young man who fell into drug use and street life. Eventually he was arrested and convicted of a felon offense.

Mo is well-educated and had technical training experience in electrical work from when he lived in Tanzania .

He came to SVI to learn about the U.S. construction industry and to help facilitate his entry into the electrical trade. His quiet but authoritative intelligence and strong motivation made him a natural leader in his cohort of students at PACT. He completed the construction, work, and life skills courses at PACT, but the ARRA supplement grant also enabled Mo to complete the program with a 24-hour HAZWOPER certification, an expanded OSHA 10 construction course that included asbestos awareness, first-aid and CPR certification, and a 10-hour course on green building systems and safety. Mo excelled in these courses, and his hard work and commitment were rewarded when he was hired by Jormac as a low-voltage apprentice in IBEW Local 46 on the Bill and Melinda Gates Foundation headquarters project. This major LEED Gold project has given Mo the opportunity to learn his craft and see up-close some of the very green systems that were introduced in the classroom only a few months ago.

About WRUC

The Western Region Universities Consortium consists of five university-based programs. Consortium members collaborate with a variety of organizations to provide health and safety training for workers who handle hazardous waste and hazardous materials in Environmental Protection Agency (EPA) Region 9 (California, Arizona, Nevada and the Pacific Islands) and EPA Region 10 (Washington, Oregon, Idaho, and Alaska). The Consortium targets superfund site workers, state and county emergency response personnel, hazardous waste and hazardous materials transportation personnel, and waste site assessment workers, with an emphasis on underserved workers.

Wisdom Tools (formerly Information in Place)

In an effort to better prepare new green construction workers, WisdomTools, an NIEHS WETP SBIR awardee, used its ARRA money to design and develop additional modules for their Green Construction Safety 101 multimedia training tool. The company's goal is to produce a well-developed training tool that can be used by a broad audience so that the workers get the training they need to retain employment in the new green economy, as well as reduce risk of injuries on the job site.

Green Construction Safety 101 is an awareness-level safety and health training tool focusing on the new and emerging "green" construction industry. It is designed to provide safety and health trainers with engaging, effective tools to supplement their classes, or to be used as a self-study tool for individual learners. The Recovery Act funds were used to fully develop a complete module on solar array installations with designs for three additional modules for green job activities in process, focusing on weatherization, green roof installation and maintenance, and wind turbine installation and maintenance.

The Recovery Act funds were instrumental for WisdomTools, because the funds allowed them to complete the development of the training tool, and enter and get a head start in the emerging green jobs domain. To date, one worker-training institution is using the training tool to develop a green job course, and one of the nation's largest unions decided to include the tool in the development of a new green job training course. Prior to receiving Recovery Act funds, approximately one-third of the staff was laid off due to the recession. However, as a result of the Recovery Fund, WisdomTools has retained its employees and is now in the process of creating new jobs internally.

About Green Construction 101

Each module starts off with a multimedia case study (in WisdomTools' jargon, an eScene™) that both engages learners and gives them a starting point for understanding what hazards might impact them on the job. After the eScene, learners are guided through job-specific hazards they might encounter and provided with images, definitions, and diagrams to aid in understanding. Each module is rounded out with Spot-the-Hazard and knowledge check activities so that, upon completion, learners and trainers can measure learning and development.

About WisdomTools

WisdomTools is a merger of two companies, WisdomTools and Information in Place. Both companies were spun out from Indiana University in 1999. The company has over 25 employees, and it specializes in designing and developing interactive training and education, including instructional design, computer programming, evaluation and assessment, informatics, graphic arts, and multimedia development. Its partnership with top-notch health and safety experts, in combination with the expertise in both instructional design and advanced training technologies, makes WisdomTools' worker health and safety product line one of the best available today.



Conclusion

NIEHS WETP is fulfilling the mission of the American Recovery and Reinvestment Act by supporting job creation and retention and preventing work-related injury and illness for target populations employed in hazardous jobs. The Recovery Act funds are essential in equipping underemployed, unemployed, and recently laid-off workers with the knowledge and tools to pursue work in construction, demolition, hazardous waste cleanup, weatherization, alternative energy development, etc.

Using the NIEHS WETP ARRA funds, awardees trained over 13,300 people in safety and health courses, such as, 10- hour and 30- hour OSHA general construction, 40-hour HAZWOPER, crane safety, load securement, first aid, and CPR. In addition, in preparing workers for the growing green jobs market, awardees developed new curricula on weatherization, green construction, and green chemistry, and offer these courses to program participants. The ARRA funds also provide life-skills training for low-income, minority, underemployed and unemployed people who have had trouble finding long-term careers due to troubled pasts (e.g., ex-offender or ex-drug addict). Life-skills training is essential to successfully prepare workers for the workplace environment.

As a result of the training funded by ARRA, several program graduates are employed in the fields of general construction, environmental remediation, and hazardous waste cleanup, and as factory and warehouse workers, tunnel (confined space) workers, pipefitters' apprentices, carpenters' apprentices, weatherization retrofitters, etc. Some of these jobs were created under the Recovery Act, such as highway construction and weatherization. Furthermore, the Recovery Act helps build capacity within the awardees' training programs and organizations.

NIEHS WETP SBIR awardees have also improved and completed the development of innovative products, which seek to serve as alternative training resources for first responders and skilled support personnel and workers employed on green construction projects. ARRA funds were instrumental in bridging the gap between product development and product marketing while providing a critical service for a government-preparedness exercise. SBIR awardees successfully showcased their products in various conferences and exercises. As a result, they were offered contracts to provide services and products commercially.

The American Recovery and Reinvestment Act funds are essential in giving underserved workers opportunities they would otherwise not have had by providing workers, such as Christopher Garza and Tim Allen, with the training and life skills to actively pursue and retain meaningful careers.



NIEHS
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Environmental Health Sciences

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