FINAL WORKSHOP REPORT

TRAINING PROGRAM STANDARDIZATION FOR FIRST RESPONSE TO WEAPONS OF MASS DESTRUCTION (WMD) EVENTS

A PUBLICATION OF THE
ANSI HOMELAND SECURITY STANDARDS PANEL

FEBRUARY 2006

ANSI
American National Standards Institute

TRAINING PROGRAM STANDARDIZATION FOR FIRST RESPONSE TO WEAPONS OF MASS DESTRUCTION (WMD) EVENTS

FINAL WORKSHOP REPORT

Organizer

ANSI Homeland Security Standards Panel (ANSI-HSSP)

Report publication date

February 2006

More information

www.ansi.org/hssp

ANSI Homeland Security Standards Panel
25 West 43rd Street – Fourth Floor
New York, NY 10036
T: 212.642.4992
F: 212.398.0023
E: mdeane@ansi.org

TABLE OF CONTENTS

Introduction

The people on the front lines serving as our nation's first responders must be prepared for a myriad of incidents and circumstances when dealing with weapons of mass destruction (WMD) events. In the event that a chemical, biological, radiological, nuclear or explosive (CBRNE) event occurs, it is vitally important that first responders be properly trained and equipped, as well as understand the hazards, their protective equipment, and proper procedures. The first responders will have to deal with these incidents at a local level, in many cases long before state, regional, or federal help is on the scene. The individuals who respond will be operating in a hazardous environment. It is important for them to take appropriate precautions, and to be able to quickly assess the hazards present in the environment they will be operating in, so they can protect themselves and others properly. Towards this end, standards play a critical role.

These first responders will be the first professionals on the scene. They could be dealing with large numbers of people trying to leave the scene, victims needing different levels of care, and as we have seen, will also face individuals trying to enter the scene. These first responders will have a diverse mix of backgrounds, experience and expertise and may be operating for protracted times on the scene, working together as a team. Ideally, they will have similar levels of training and awareness of operating in a hazardous environment and will coordinate their activities through an incident command structure following the National Incident Management System (NIMS) guidelines. The incident command structure is crucial to ensuring their safety and in maximizing their effectiveness on the scene.

A set of measurable minimum core competencies is necessary for all first responders on the scene. Without standardized training to these competencies, there is the risk that they will put themselves, their peers, the victims, and the general public in additional danger. Proper protocols and procedures must be followed. For example, the use of personal protective equipment - its handling, cleaning and decontamination - are absolutely critical in preventing a chemical, biological, or radiological incident from becoming worse, and jeopardizing the health and safety of others on the scene. The safety of the first responder team is mission critical. We do not want first responders to become victims. Therefore, we must ensure that every responder on the scene has the minimum core competencies and skills to perform their tasks as part of a team without unduly jeopardizing each other or the people they are assisting.

Background for ANSI-HSSP Workshop

The American National Standards Institute's Homeland Security Standards Panel (ANSI-HSSP) has as its mission to identify existing consensus standards, or if none exists, assist the U.S. Department of Homeland Security (DHS) and those sectors requesting assistance to accelerate development and adoption of consensus standards critical to homeland security. The ANSI-HSSP promotes a positive, cooperative partnership between the public and private sectors in order to meet the needs of the nation in this critical area. To address specific homeland security standards areas, workshops are convened under the ANSI-HSSP to bring together subject matter experts in that particular security area.

During the breakout session discussions at the June 9-10, 2003 ANSI-HSSP plenary meeting, the area of training programs for first response to WMD events was identified as one where further examination by subject matter experts was needed. DHS and the ANSI-HSSP Steering Committee concurred and agreed that a workshop should be convened to examine standardization in this important area. Mr. Robert Vondrasek, Vice President of Codes and Standards Operations, National Fire Protection Association (NFPA), agreed to serve as the workshop leader.

Prior to the launch of the workshop, a survey was conducted of first responder organizations, with results being collected in January 2004. First responder categories surveyed included those from the fire service, emergency medical services, law enforcement, emergency management, public safety and health, health care, and utility industry. A summary of the results of this survey can be found in Annex A. These results were valuable in determining the stakeholders that should participate in the workshop, areas that should be addressed, and resources that could be utilized throughout the process.

Workshop Objective and Timeline

The leadership of the ANSI-HSSP, along with the workshop leader, determined that the objective of the workshop should be to identify existing training standards, training standards under development, and gap areas in training programs for first responders to CBRNE terrorist events. These standards should address:

- Pre-Incident Planning, Incident Response and Operations, Incident Command and Coordination
- Use and Care of Personal Protective Equipment (PPE) and Operational Equipment
- Contamination Mitigation and Decontamination

Workshop forums were used to conduct most of the participant activity. The workshop participants reviewed the existing body of standards applicable to training first responders. These standards included traditional standards (by both organizations accredited by ANSI and those that are not), and other standard practices as defined in federal regulations or outlined by organizations such the Emergency Management Institute (EMI). There were a number of standards and good practice information available, but there appeared to be little effort to coordinate this information into a single location to examine the overall landscape. As a result, it was noted that some overlap and gaps would likely exist.

After the first workshop meeting was convened, it was agreed that the workshops would focus only on standards and guidelines for the creation and implementation of these programs, rather than also trying to capture all the different good practices contained in training programs currently in existence. Time permitting, it was agreed that the workshops should also identify any existing accreditation programs for this area.

The output product from the workshops is an analysis, in matrix form, focused on inventorying existing standards applicable to training first responders to WMD events by first responder category and identifying the associated technical capability requirement from the DHS Target Capabilities List (TCL). During the course of the work the DHS TCL changed several times. The workshop participants reviewed their earlier work and reclassified their determinations to realign them with new TCL's twice. The TCL is once again undergoing revision, the preliminary version of which is contained in Annex B for cross-reference purposes.

The workshop participants looked at accrediting bodies for training programs that used criteria based upon identifiable training standards. Accrediting organizations for some first responder categories exist and some

accrediting activity is taking place. The end of the standards matrix lists some of the organizations involved with this work.

Participation

Three in-person workshop meetings were held as follows:

June 10, 2004	Hosted by National Fire Protection Association (Braintree, MA)
September 23, 2004	Hosted by Anteon Corporation (Arlington, VA)
January 27, 2005	Hosted by Anteon Corporation (Arlington, VA)

Additionally, conference calls and e-mail communications were used to facilitate and collect the workshop participants' input. The following organizations supplied experts to one or more of these workshop meetings:

American Public Works Association
ASIS International
AT&T
Bechtel Nevada
Boston Fire Department
Center for Naval Analyses
EAI Corporation
Emergency Management Institute
Health Physics Society - Homeland Security Committee
Health Resources and Services Administration –
    Emergency Preparedness Evaluation & Specialty Branch
Idaho National Engineering & Environmental Laboratory
Information Handling Services
International Association of Fire Chiefs
National Council of State Boards of Nursing
National Fire Protection Association
National Fire Protection Association – Fire Services Section
National Institute of Standards and Technology

National Volunteer Fire Council

Oak Ridge Associated Universities, Oak Ridge Institute for Science and Education

Oregon Emergency Management

SafeTech Solutions

Standards Based Programs, Inc.

U.S. Department of Energy – Transportation Emergency Preparedness Program

U.S. Department of Homeland Security – Environmental Measurements Laboratory

U.S. Department of Homeland Security – Federal Emergency Management Agency

U.S. Department of Homeland Security – Office for Domestic Preparedness

U.S. Department of Homeland Security – NIMS Integration Center

U.S. Department of Homeland Security – Science and Technology Directorate

U.S. Department of Homeland Security – U.S. Coast Guard Headquarters, Office of Defense Operations

U.S. Fire Administration

Verizon

Washington Safety Management Solutions, LLC (Washington Group International)

Methodology

Homeland Security Presidential Directive (HSPD) 8 requires establishing the National Preparedness Goal to "…establish measurable readiness priorities and targets that appropriately balance the potential threat and magnitude of terrorist attacks, major disasters, and other emergencies with the resources required to prevent, respond to, and recover from them. It will also include readiness metrics and elements that support the national preparedness goal including standards for preparedness assessments and strategies, and a system for assessing the Nation's overall preparedness to respond to major events, especially those involving acts of terrorism."

To this end the DHS Office for Domestic Preparedness (ODP) has postulated 15 National Planning Scenarios that include different types of major terrorist incidents, large natural disasters, and pandemic disease. A list of tasks required to interdict, mitigate, respond and recover from these incidents has also been produced by ODP. This list is referred to as the Universal Task List (UTL). It contains over 1600 specific tasks that need to be performed in responding to the 15 scenarios. The UTL can be further sorted down to a list of 36 skills or Target Capabilities. The Target Capabilities List (TCL) groups the UTL tasks into 36 identifiable skills or

capabilities needed to do the tasks in the UTL. These 36 TCL skills/capabilities are further grouped into ten TCL categories called "Missions" considering the interrelationship and commonality of capabilities as applied at different phases of an incident and commonality. The workshop participants identified training standards applicable to TCL Missions for different categories of first responders.

The workshop used the following ten TCL Missions as guided by the then current input from ODP (see Annex B for the latest draft TCL Mission groupings proposed by ODP):

1. Prevention/Intelligence
2. Agriculture and Food
3. Incident Management
4. Incident Response
5. Public Protection
6. Criminal Investigation
7. Mass Care
8. Public Health and Medical
9. Public Information
10. Recovery

In looking at the different types of first responders, the workshop identified the following categories of first responders including:

1. Private Sector:
   - water and wastewater management
   - agriculture and food
   - telecommunications (phone and data)
   - energy (electric utilities, including dams, nuclear oil and natural gas companies)
   - transportation (including aviation, railways, pipelines, marine terminals, trucking)
   - defense industrial based contractors
   - chemicals and hazardous materials
   - commercial and industrial buildings and facilities
   - skilled construction and trade workers
2. Fire Service

3. Public Works
4. Public Health
5. Emergency Medical Services (pre-hospital)
6. Hazardous Materials
7. Public Information
8. Healthcare
9. State and Local Emergency Management
10. Federal First Responders
11. Law Enforcement

The output matrix is constructed by first responder category, indicating which standards are available from which organizations. The standards were identified by their designation and/or number and title. In addition, the TCL Missions that the standards addressed are identified by the numbers 1-10, corresponding to the TCL mission areas. In many cases, the 'standards' do not have numbers, but are guidelines or parts of federal regulations with simply a title listed. Among the private sector SDO standards, most include number designations in the titles. The matrix also lists groups that are involved with accreditation—some aligned with first responder categories and some that are not.

The following agencies were named in our initial survey repeatedly, in conjunction with first responder training programs. These agencies have been conducting first responder training at the national level for some time:

  Alcohol, Tobacco and Firearms (ATF)
  Center for Disease Control and Prevention (CDC)
  Department of Defense (DOD)
  Department of Energy (DOE)
  Federal Law Enforcement Training Center (FLETC)
  U.S. Fire Administration and Emergency Management Institute (USFA-EMI)
  National Domestic Preparedness Consortium (NDPC), which includes:
    – ODP Center for Domestic Preparedness (CDP)
    – New Mexico Institute of Mining and Technology (NMIMT)
    – Louisiana State University (LSU)
    – Texas A&M (TEEX)
    – DOE's Nevada Test Site (NTP)

- Michigan State University (MSU)
- National Sheriff's Association (NSA)
- National Terrorism Preparedness Institute (NTPI)
- Pine Bluff Arsenal (PBA)

What we learned through the survey and the workshop meetings was that most states and cities recognized federal sponsored training programs, particularly those from EMI or NDPC. Large numbers of first responders have gone through, and continue to go through, their training programs. Some aspects of these training programs are in line with the standards identified in the matrix; other aspects of the programs are not. It was beyond the scope of the workshop to try to analyze training programs to determine where national standards are applied. In many cases, these training programs are sources of best practices upon which standards might be written.

Another finding from the surveys and workshop discussion was the difficulty faced by first responders seeking training. For example, fire service and law enforcement personnel must often travel to distant locations to receive training, which often has hands-on components. In the case of police departments and career fire departments, the issue of paying a premium for a person to work in place of the person who has been "pulled off the line" to receive training is significant. In the case of the volunteer fire service, the problem is compounded by the fact that much of the training would be done on the first responders' personal time. For these reasons, it is important to have national standards upon which local programs may be established to provide similar levels of training that are more accessible to the first responder community. In an effort to reach more people, groups like NDPC have offered on-line training courses. However, many courses require hands-on activities or use costly simulations to be effective.

The issue of training standards is going to become even more acute with the advent of a national identification card. Currently, it is being implemented for the military, but the next group that will be receiving national identification cards with imbedded biometric, qualifications, and certifications data, will be the first responder community. In fact, in the future these cards will be required for first responders to gain access to incident scenes.

In the current environment, there are really no agreed upon competencies for training multi-disciplined response teams tied to national standards. As one can see, the efforts to have postulated scenarios and a task

lists and capabilities defined is helpful, but the TCL's have not yet been turned into job performance requirements, on which to base training and competencies for all categories of first responders.

Findings and Next Steps

The federal training programs are numerous and well respected as good sources of best practices information. There continues to be duplication and non-coordination of training requirements for first responders. Some standards have been used as a basis for training courses, but most of the training programs do not seem to have standards as their basis. In looking at the matrix, there are applicable standards and standards information for every first responder category tied to every category of Mission. However, without an in-depth analysis of each standard it is impossible to know whether all the training needs for each category of first responder, for all ten TCL Missions, is being met. This is an undertaking beyond the scope and resources of our workshop.

In examining the matrix, some of the standards available, for example pertaining to PPE, do not yet seem to be available to all first responder categories. An area which does not seem to be covered by standards is decontamination, which includes decontaminating first responders and their gear, evidence, debris, heavy equipment, tools, victims, and others exposed at the incident scene. There also does not seem to be any information in standards form with regard to training to handle massive post traumatic stress. Though there are standards on handling radiation detection instrumentation, there will soon be a raft of new equipment for bio- and chem- hazard detection for which procedures for maintenance and use have to be established. This is important because the use of this instrumentation is part of first responders' early size-up of the kinds and concentrations of hazards they face.

In the area of accreditation, the workshop identified organizations qualified to accredit, and some that are accrediting training programs. Some of those organizations use standards to assess training programs against national standards, such as the National Board for Fire Service Professional Qualifications (NBFSPQ). Other accrediting organizations have established their own standards. It is not clear how they apply training standards to their accrediting process. Accrediting bodies for law enforcement personnel seemed to be lacking. Where the first responder groups are served by accreditation bodies, we identified the organizations that accredit programs, not those certifying individuals. Further study of this issue is warranted.

In the course of this work, some international input was received, notably from a German fire department. We are aware of the International Organization for Standardization (ISO) technical committees addressing personal protective equipment and clothing (TC 94), and civil defense (TC 223). In the case of the former, requirements track closely with the U.S. requirements, particularly for the fire service. In the case of the latter, the ISO technical committee has its kick-off meeting in May 2006. The workshops did not address international training standards, such as those from ISO. This is another area that might be further explored in the future.

As the work progressed, our interface with the DHS Office for Domestic Preparedness (ODP) indicated that there were some moving target parameters in our analysis as indicated before. ODP was also looking at standards for training programs for first responders. This report from the ANSI-HSSP workshop will be handed over to ODP to build upon this body of work. They have become the lead federal agency with regard to training first responders and would be the appropriate group to further disperse this information, analyze current standards gaps and set priorities for addressing these gaps in a timely manner.

Although additional work and analysis is needed, we believe that we have created a useful benchmark matrix for first responder organizations that can be further built upon. It serves not only as a resource for available first responder training standards, but also to be used to determine those standards that are needed in the immediate future.

Acknowledgements

ANSI wishes to acknowledge the support and participation of all the organizations that supplied experts to the workshop meetings and completed the survey questionnaires. We also wish to expresses sincere appreciation to all the individual workshop attendees for sharing their expertise and making the contributions of time needed to support this large group effort. Without their participation, the workshop meetings and this final report would not have been possible.

ANSI offers its great appreciation to NFPA for supplying the workshop leader, Mr. Vondrasek, whose leadership was essential for keeping this workshop on track and for the successful delivery of this final report in a timely manner.

It is important to recognize the role of the ANSI-HSSP Steering Committee has played, identifying and initiating workshops such as this one. It is appropriate to recognize the leadership that the ANSI-HSSP co-chairs, Dan Bart of the Telecommunications Industry Association (TIA), and Mary Saunders of NIST, have provided. Additionally, the workshops were meaningful and compelling, due largely to the continued involvement and support from the U.S. Department of Homeland Security (DHS) personnel, including Bert Coursey, Barbara Biehn, Gordon Sachs, Bob Zimmerman and others who helped focus the discussions and offered encouragement as we dealt with the voluminous information associated with this subject. Thanks also go to Matt Deane of ANSI, who served the workshop well as the program manager to this activity.

ANSI further thanks NFPA for hosting the first workshop meeting. ANSI thanks Mr. Ashley Moore and also the Anteon Corporation for hosting the second and third meetings at its Arlington, Virginia office. These venues and facilities, provided at no cost to ANSI, allowed for the workshop meetings to be convened without a participation fee to cover costs and helped insure a successful turnout for each meeting.

Matrix of Standards/Guidelines on Training Programs for First Responders in WMD Events

| These standards are classified per the ODP 10 Target Capability Categories:

1. Prevention/Intelligence
2. Agriculture and Food
3. Incident Management
4. Incident Response
5. Public Protection
6. Criminal Investigation
7. Mass Care
8. Public Health and Medical
9. Public Information
10. Recovery | In the following ODP first responder categories:

· Private sector
· Law enforcement
· Fire Service
· Public Works
· Public Health
· Emergency medical services (pre-hospital)
· Hazardous materials
· Public information
· Health care
· State and local emergency management
· Federal First Responders | Private Sector Includes the following under the *National Strategy:*

· Water and waste treatment
· Agriculture and food
· Telecommunications (phone and data)
· Energy (electric utilities including dams, nuclear, oil and natural gas companies)
· Transportation (aviation, railways, ports, pipelines, marine terminals, trucking, etc.)
· Defense industrial base contractors
· Chemicals and hazardous materials
· Commercial and industrial buildings & facilities
· Skilled construction and trade workers |

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
Private sector				
1, 3, 4	American Society for Industrial Security (ASIS International)		ASIS General Security Risk Assessment Guideline	http://www.asisonline.org/guidelines/guidelines.pdf
1	American Society for Industrial Security (ASIS International)		ASIS Chief Security Officer Guideline	http://www.asisonline.org/guidelines/guidelineschief2004.pdf
1, 4	American Society for Industrial Security (ASIS International)		ASIS Threat Advisory System Response Guideline	http://www.asisonline.org/guidelines/guidelinesthreat2003.pdf
1, 3, 4, 5, 9, 10	American Society for Industrial Security (ASIS International)		ASIS Business Continuity Guideline	http://www.asisonline.org/guidelines/guidelinesbc.pdf
1	American Society for Industrial Security (ASIS International)		ASIS Private Security Officer Selection and Training Guideline	www.asisonline.org/guidelines/guidelines.htm
3, 4, 5, 7, 8, 9, 10	Health Physics Society (HPS)	ANSI N13.XX	Training standards for responders to nuclear and radiological terrorist events	Currently a PINS submission from HPS to become an American National Standard
	Individual state laws/ordinances		Example: CA Title 17	http://www.dds.ca.gov/Title17/T17main.cfm

	National Council on Radiation Protection (NCRP)	NCRP No. 138	Management of terrorist events involving radioactive material	Guidance document from the National Council on Radiation Protection and Measurements available at: http://www.ncrponline.org/pubs.html
3, 4, 5, 7, 8, 9	National Fire Protection Association (NFPA)	NFPA 472	Standard for Professional Competence of Responders to Hazardous Materials Incidents	
1 through 10	National Fire Protection Association (NFPA)	NFPA 1600	Standard on Disaster/Emergency Management and Business Continuity Programs	
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.120 (q)	Hazardous Waste and Emergency Response Regulation	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9765
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.134	Standard on Respiratory Protection	
1, 3	Occupational Safety & Health Administration (OSHA)	20 CFR 1910.119	Process Safety Management Standard	The Process Safety Management Standard was promulgated after the Bhopal and Institute, WV chemical plant incidents. The standard provides excellent guidance for prevention. http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9760

1 through 10	U.S. Department of Homeland Security (DHS)		National Response Plan (NRP)	http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml
1 through 10	U.S. Department of Homeland Security (DHS)		National Incident Management System (NIMS)	http://www.fema.gov/pdf/nims/nims_doc_full.pdf
1, 3, 4, 5, 8, 9, 10	U.S. Department of Transportation/Federal Emergency Management Agency (DoT/FEMA)		HMEP Guidelines for Hazmat/WMD Response, Planning and Prevention Training	http://www.usfa.fema.gov/subjects/hazmat/hmep.shtm
3, 4, 5, 8	U.S. Environmental Protection Agency (EPA)	40 CFR 311	Hazardous Waste and Emergency Response	Identical to OSHA 1910.120 (q) Available at: http://www.access.gpo.gov/nara/cfr/waisidx_03/40cfr311_03.html
3, 4, 8, 10	U.S. Nuclear Regulatory Commission (USNRC)	10 CFR 19	NRC regulations for training people working with radioactive materials	

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
Law enforcement				
3, 4, 5	National Fire Protection Association (NFPA)	NFPA 471	Recommended Practice for Responding to Hazardous Materials Incidents	
3, 4, 5, 7, 8, 9	National Fire Protection Association (NFPA)	NFPA 472	Standard for Professional Competence of Responders to Hazardous Materials Incidents	
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.120 (q)	Hazardous Waste and Emergency Response Regulation	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9765
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.134	Regulation on Respiratory Protection	
1 through 10	U.S. Department of Homeland Security (DHS)		National Response Plan (NRP)	http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml

1 through 10	U.S. Department of Homeland Security (DHS)		National Incident Management System (NIMS)	http://www.fema.gov/pdf/nims/nims_doc_full.pdf
1, 3, 4, 5, 8, 9, 10	U.S. Department of Transportation/Federal Emergency Management Agency (DoT/FEMA)		HMEP Guidelines for Hazmat/WMD Response, Planning and Prevention Training	http://www.usfa.fema.gov/subjects/hazmat/hmep.shtm
3, 4, 5, 8	U.S. Environmental Protection Agency (EPA)	40 CFR 311	Hazardous Waste and Emergency Response	Companion to 1910.120 Available at: http://www.access.gpo.gov/nara/cfr/waisidx_03/40cfr311_03.html

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
Fire service				
1 through 10	ASTM International	ASTM WK4182	Standard Guide for Personnel Responding to an Emergency Involving an Act of Terrorism (Work Item)	
4	National Fire Protection Association (NFPA)	NFPA 1001	Standard for Fire Fighter Professional Qualifications	
4	National Fire Protection Association (NFPA)	NFPA 1002	Standard for Apparatus Driver/Operator Professional Qualifications	
4, 5, 8	National Fire Protection Association (NFPA)	NFPA 1006	Standard for Rescue Technician Professional Qualifications	
3, 4, 5, 7, 8, 9	National Fire Protection Association (NFPA)	NFPA 1021	Standard for Fire Officer Professional Qualifications	
1, 6	National Fire Protection Association (NFPA)	NFPA 1033	Standard for Fire Investigator Professional Qualifications	

3, 4	National Fire Protection Association (NFPA)	NFPA 1404	Standard for Fire Service Respiratory Protection Training	
3, 4	National Fire Protection Association (NFPA)	NFPA 1405	Guide for Land-Based Fire Fighters Who Respond to Marine Vessel Fires	Identifies the elements of a comprehensive marine fire-fighting response program
3, 4	National Fire Protection Association (NFPA)	NFPA 1410	Standard on Training for Initial Emergency Scene Operations	
3, 4	National Fire Protection Association (NFPA)	NFPA 1500	Standard for Fire Department Occupational Safety & Health Program	
3, 4	National Fire Protection Association (NFPA)	NFPA 1521	Standard for Fire Department Safety Officer	
3, 4, 5, 8, 9	National Fire Protection Association (NFPA)	NFPA 1561	Standard on Emergency Services Incident Management System	
1 through 10	National Fire Protection Association (NFPA)	NFPA 1600	Standard on Disaster/Emergency Management and Business Continuity Programs	

3, 4, 5, 8	National Fire Protection Association (NFPA)	NFPA 1670	Standard on Operations and Training for Technical Rescue Incidents	Identifies and establishes performance levels for safely and effectively conducting operations at technical rescue incidents.
3, 4, 5, 7, 8, 9, 10	National Fire Protection Association (NFPA)	NFPA 1710	Standard for Organizational Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments	
3, 4, 5, 7, 8, 9, 10	National Fire Protection Association (NFPA)	NFPA 1720	Standard for Organizational Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer and Combination Fire Departments	

3, 4, 5	National Fire Protection Association (NFPA)	NFPA 471	Recommended Practice for Responding to Hazardous Materials Incidents	
3, 4, 5, 8	National Fire Protection Association (NFPA)	NFPA 472	Standard for Professional Competence of Responders to Hazardous Materials Incidents	New chapter on EMS being developed
6	National Fire Protection Association (NFPA)	NFPA 921	Guide for Fire & Explosion Investigations	Establishes guidelines and recommendations for the safe and systematic investigation or analysis of fire and explosion incidents.
3, 4, 5	National Fire Protection Association (NFPA)	NFPA 473	Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents	
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.134	Standard on Respiratory Protection	
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.120 (q)	Hazardous Waste and Emergency Response Regulation	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9765

3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.146	Permit-Required Confined Space	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9797
1 through 10	U.S. Department of Homeland Security (DHS)		National Response Plan (NRP)	http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml
1 through 10	U.S. Department of Homeland Security (DHS)		National Incident Management System (NIMS)	http://www.fema.gov/pdf/nims/nims_doc_full.pdf
1, 3, 4, 5, 8, 9, 10	U.S. Department of Transportation/Federal Emergency Management Agency (DoT/FEMA)		HMEP Guidelines for Hazmat/WMD Response, Planning and Prevention Training	http://www.usfa.fema.gov/subjects/hazmat/hmep.shtm
3, 4, 5, 8	U.S. Environmental Protection Agency (EPA)	40 CFR 311	Hazardous Waste and Emergency Response	Companion to 1910.120 Available at: http://www.access.gpo.gov/nara/cfr/waisidx_03/40cfr311_03.html

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
Public works				
3, 4, 5, 8	Occupational Safety & Health Adminis-tration (OSHA)	29 CFR 1910.134	Standard on Respiratory Protection	
3, 4, 5, 8	Occupational Safety & Health Adminis-tration (OSHA)	29 CFR 1910.120 (q)	Hazardous Waste and Emergency Response Regulation	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9765
3, 4, 5, 8	Occupational Safety & Health Adminis-tration (OSHA)	29 CFR 1910.146	Permit Required Confined Space	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9797
1 through 10	U.S. Department of Homeland Security (DHS)		National Response Plan (NRP)	http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml
1 through 10	U.S. Department of Homeland Security (DHS)		National Incident Management System (NIMS)	http://www.fema.gov/pdf/nims/nims_doc_full.pdf
1, 3, 4, 5, 8, 9, 10	U.S. Department of Transportation/Fede ral Emergency Management Agency (DoT/FEMA)		HMEP Guidelines for Hazmat/WMD Response, Planning and Prevention Training	http://www.usfa.fema.gov/subjects/hazmat/hmep.shtm
3, 4, 5, 8	U.S. Environmental Protection Agency (EPA)	40 CFR 311	Hazardous Waste and Emergency Response	Companion to 1910.120 Available at: http://www.access.gpo.gov/nara/cfr/waisidx_03/40cfr311_03.html

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
Public health				
1, 3, 4, 8, 9	American Public Health Association (APHA)		Bioterrorism and Emergency Readiness: Competencies for All Public Health Workers (November, 2002)	http://cpmcnet.columbia.edu/dept/nursing/institute-centers/chphsr/btcomps.pdf
3, 4, 5	National Fire Protection Association (NFPA)	NFPA 471	Recommended Practice for Responding to Hazardous Materials Incidents	
3, 4, 5, 8	National Fire Protection Association (NFPA)	NFPA 472	Standard for Professional Competence of Responders to Hazardous Materials Incidents	New chapter on EMS being developed
3, 4, 5	National Fire Protection Association (NFPA)	NFPA 473	Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents	
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.134	Standard on Respiratory Protection	

3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.120 (q)	Hazardous Waste and Emergency Response Regulation	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9765
4, 8 ,10	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.1030	Blood borne pathogens	This standard is critical for the protection of emergency medical services. It is available at: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051
4	U.S. Centers for Disease Control & Prevention (CDC)		Public Health Emergency Response Guide for State, Local and Tribal Public Health Directors (Version 1.0)	http://www.bt.cdc.gov/planning/pdf/cdcresponseguide.pdf
1 through 10	U.S. Department of Homeland Security (DHS)		National Response Plan (NRP)	http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml
1 through 10	U.S. Department of Homeland Security (DHS)		National Incident Management System (NIMS)	http://www.fema.gov/pdf/nims/nims_doc_full.pdf
1, 3, 4, 5, 8, 9, 10	U.S. Department of Transportation/Federal Emergency Management Agency (DoT/FEMA)		HMEP Guidelines for Hazmat/WMD Response, Planning and Prevention Training	http://www.usfa.fema.gov/subjects/hazmat/hmep.shtm
3, 4, 5, 8	U.S. Environmental Protection Agency (EPA)	40 CFR 311	Hazardous Waste and Emergency Response	Companion to 1910.120 Available at: http://www.access.gpo.gov/nara/cfr/waisidx_03/40cfr311_03.html

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
Emergency medical services (pre-hospital)				
4	ASTM International	ASTM F1031-00	Standard Practice for Training the Emergency Medical Technician (Basic)	
4	ASTM International	ASTM F1328-00	Standard Guide for Training Emergency Medical Technician (Basic) to Prepare Patients for Medical Transportation	
4	ASTM International	ASTM F1329-00	Standard Guide for Training the Emergency Medical Technician (Basic) in Basic Anatomy and Physiology	
4	ASTM International	ASTM F1418-01	Standard Guide for Training the Emergency Medical Technician (Basic) in Roles and Responsibilities	

4	ASTM International	ASTM F1419-00	Standard Guide for Training the Emergency Medical Technician (Basic) To Manage Shock	
4	ASTM International	ASTM F1420-01	Standard Guide for Training the Emergency Medical Technician (Basic) to Perform Patient Management Techniques	
4	ASTM International	ASTM F1219-00	Standard Guide for Training the Emergency Medical Technician (Basic) to Perform Patient Initial and Detailed Assessment	
4	ASTM International	ASTM F1705-96	Standard Guide for Training Emergency Medical Services Ambulance Operations	
4, 8	ASTM International	ASTM F1149-93	Standard Practice for Qualifications, Responsibilities, and Authority of Individuals and Institutions Providing Medical Direction of	

			Emergency Medical Services	
4	ASTM International	ASTM F1285-90	Standard Guide for Training the Emergency Medical Technician (Basic) to Perform Patient Examination Techniques	
4	ASTM International	ASTM F1453-92	Standard Guide for Training and Evaluation of First Responders Who Provide Emergency Medical Care	
4	ASTM International	ASTM F1651-95	Standard Guide for Training Emergency Medical Technician (Paramedic)	
4	ASTM International	ASTM F1229-01	Standard Guide for the Qualification and Training of EMS Air-Medical Patient Care Providers	

4	ASTM International	ASTM F1654-95(2002)	Standard Guide for Training and Evaluation of Individuals Who are Responsible for or Perform Triage in Pre-hospital Environment	
4	ASTM International	ASTM F1655-95(2002)	Standard Guide for Training First Responders Who Practice in Wilderness, Delayed, or Prolonged Transport Settings	
4	Commission on Accreditation of Ambulance Services (CAAS)	106.06	Employee Training & Development	www.caas.org
4	Commission on Accreditation of Ambulance Services	201.01	Medical Oversight	www.caas.org
4	Commission on Accreditation of Ambulance Services	201.02	Clinical Protocols	www.caas.org
4	Commission on Accreditation of Ambulance Services	201.06	Clinical Standards Quality Improvement	www.caas.org
4	Commission on Accreditation of Ambulance Services	204.04	Communications Center - Training	www.caas.org

3, 4, 5	National Fire Protection Association (NFPA)	NFPA 471	Recommended Practice for Responding to Hazardous Materials Incidents	
3, 4, 5, 8	National Fire Protection Association (NFPA)	NFPA 472	Standard for Professional Competence of Responders to Hazardous Materials Incidents	New chapter on EMS being developed
3, 4, 5	National Fire Protection Association (NFPA)	NFPA 473	Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents	
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.134	Standard on Respiratory Protection	
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.146	Permit Required Confined Space	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9797
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.120 (q)	Hazardous Waste and Emergency Response Regulation	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9765
4, 8 ,10	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.1030	Blood borne pathogens	This standard is critical for the protection of emergency medical services. It is available at: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051

4	U.S. Centers for Disease Control & Prevention (CDC)		Public Health Emergency Response Guide for State, Local and Tribal Public Health Directors (Version 1.0)	http://www.bt.cdc.gov/planning/pdf/cdcresponseguide.pdf
9	U.S. Centers for Disease Control & Prevention (CDC)		Publication communication triage	Focus Area F: Risk Communication and Health Information Dissemination (Public Information and Communication)
1 through 10	U.S. Department of Homeland Security (DHS)		National Response Plan (NRP)	http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml
1 through 10	U.S. Department of Homeland Security (DHS)		National Incident Management System (NIMS)	http://www.fema.gov/pdf/nims/nims_doc_full.pdf
1, 3, 4, 5, 8, 9, 10	U.S. Department of Transportation/Federal Emergency Management Agency (DoT/FEMA)		HMEP Guidelines for Hazmat/WMD Response, Planning and Prevention Training	http://www.usfa.fema.gov/subjects/hazmat/hmep.shtm
3, 4, 5, 8	U.S. Environmental Protection Agency (EPA)	40 CFR 311	Hazardous Waste and Emergency Response	Companion to 1910.120 Available at: http://www.access.gpo.gov/nara/cfr/waisidx_03/40cfr311_03.html

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
Hazardous materials				
4	ASTM International	ASTM F 1011	Standard Guide for Developing a Hazardous Materials Training Curriculum for Initial Response Personnel	Covers a format for a hazardous materials spill initial response team training curriculum
3, 4, 5	National Fire Protection Association (NFPA)	NFPA 471	Recommended Practice for Responding to Hazardous Materials Incidents	
3, 4, 5, 7, 8, 9	National Fire Protection Association (NFPA)	NFPA 472	Standard for Professional Competence of Responders to Hazardous Materials Incidents	Identifies levels of competence required of responders to hazardous materials incidents
3, 4, 5	National Fire Protection Association (NFPA)	NFPA 473	Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents	Identifies levels of competence required of emergency medical services (EMS) personnel who respond to hazardous materials incidents
3, 4, 5, 8, 9	National Fire Protection Association (NFPA)	NFPA 1561	Standard on Emergency Services Incident Management System	

3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.120 (q)	Hazardous Waste and Emergency Response Regulation	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9765
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.134	Standard on Respiratory Protection	
3, 4, 5, 8	Occupational Safety & Health Administration (OSHA)	29 CFR 1910.146	Permit Required Confined Space	http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9797
1 through 10	U.S. Department of Homeland Security (DHS)		National Response Plan (NRP)	http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml
1 through 10	U.S. Department of Homeland Security (DHS)		National Incident Management System (NIMS)	http://www.fema.gov/pdf/nims/nims_doc_full.pdf
1, 3, 4, 5, 8, 9, 10	U.S. Department of Transportation/Federal Emergency Management Agency (DoT/FEMA)		HMEP Guidelines for Hazmat/WMD Response, Planning and Prevention Training	http://www.usfa.fema.gov/subjects/hazmat/hmep.shtm
3, 4, 5, 8	U.S. Environmental Protection Agency (EPA)	40 CFR 311	Hazardous Waste and Emergency Response	Companion to 1910.120 Available at: http://www.access.gpo.gov/nara/cfr/waisidx_03/40cfr311_03.html

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
Public Information				
5, 9	Federal Communicators Network		Federal Communicators Guide	2002 Version available at: http://www.usda.gov/news/pubs/fcn/table.htm
5, 9	Pre-Event Message Development Team, University of Alabama at Birmingham School of Public Health; U.S. Centers for Disease Control and Prevention (CDC); the Association of Schools of Public Health (ASPH); and the Pre-Event Message Development Teams at St. Louis University, University of California at Los Angeles, and the University of Oklahoma.		Media kits for first response	All of the "general public" work related to rad issues has been completed, as has the "first responder" and "health department" work. At the moment, carrying out the "hospital ED" work. CDC is currently utilizing our research to prepare message kits, but these will not be completed until later this year.

5, 9	U.S. Centers for Disease Control & Prevention (CDC)		Best practice guide	www.cdc.gov
1 through 10	U.S. Department of Homeland Security		National Response Plan (NRP)	http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml
1 through 10	U.S. Department of Homeland Security		National Incident Management System (NIMS)	http://www.fema.gov/pdf/nims/nims_doc_full.pdf
5, 9	U.S. Department of Homeland Security - Office for Domestic Preparedness		Homeland Security Exercise Evaluation Program (HSEEP)	http://www.ojp.usdoj.gov/odp/docs/hseep.htm
1, 3, 4, 5, 8, 9, 10	U.S. Department of Transportation/Federal Emergency Management Agency (DoT/FEMA)		HMEP Guidelines for Hazmat/WMD Response, Planning and Prevention Training	http://www.usfa.fema.gov/subjects/hazmat/hmep.shtm

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
Health care				
8	American College of Emergency Physicians (ACEP)		Developing Objectives, Content, and Competencies for the Training of Emergency Medical Technicians, Emergency Physicians, and Emergency Nurses to Care for Casualties Resulting From Nuclear, Biological or Chemical (NBC) Incidents: Final Report. (April 23, 2001)	http://www.acep.org/library/pdf/NBCreport2.pdf
8	American College of Emergency Physicians (ACEP)		Positioning America's Emergency Health Care System to Respond to Acts of Terrorism - A Report of the Terrorism Response Task Force American College	http://www.acep.org/library/pdf/terrorismResponse.pdf

			of Emergency Physicians (October 2002)	
8	American College of Emergency Physicians (ACEP)		Educational Competencies for Registered Nurses Responding to Mass Casualty Incidents (August 2003)	http://www.acep.org/library/pdf/disaster_response.pdf
3, 7, 8, 10	Association of American Medical Colleges (AAMC)		• Training Future Physicians About Weapons of Mass Destruction: Report of the Expert Panel on Bioterrorism Education for Medical Students (2003	http://www.aamc.org/newsroom/bioterrorism/bioterrorismrec.pdf
3, 4, 7, 8	ASTM International	ASTM F1453-92(2003)	Standard Guide for Training and Evaluation of First Responders Who Provide Emergency Medical Care	

8	National Association of EMS Physicians (NAEMSP)		Medical Response to Terrorism - Sponsored by: The American Public Health Association The National Association of EMS Physicians The National Association of State EMS Directors	http://www.naemsp.org/medicalresponse/Medical%20Response%20to%20Terrorism_files/frame.htm
7, 8	National Fire Protection Association (NFPA)	NFPA 99	Standard for Health Care Facilities	2002 Edition currently under revision. Applicable section is Chapter 19
1, 7, 8	Occupational Safety & Health Administration (OSHA)		Best Practices for Protection of Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances	
7, 8	The International Nursing Coalition for Mass Casualty Education (INCMCE)			http://www.mc.vanderbilt.edu/nursing/coalitions/INCMCE/educomps.pdf
1 through 10	U.S. Department of Homeland Security (DHS)		National Response Plan (NRP)	http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml

1 through 10	U.S. Department of Homeland Security (DHS)		National Incident Management System (NIMS)	http://www.fema.gov/pdf/nims/nims_doc_full.pdf
1, 3, 4, 5, 8, 9, 10	U.S. Department of Transportation/Federal Emergency Management Agency (DoT/FEMA)		HMEP Guidelines for Hazmat/WMD Response, Planning and Prevention Training	http://www.usfa.fema.gov/subjects/hazmat/hmep.shtm

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
State and local emergency management				
1 through 10, except 6	Emergency Management Accreditation Program (EMAP)		EMAP Standard	Describes the required components for quality disaster management systems for state and local government. Based on and consistent with the NFPA 1600.
1 through 10	Federal Emergency Management Agency (FEMA)		National Incident Management System	http://www.fema.gov/nims
1 through 10, except 6	Federal Emergency Management Agency (FEMA)		State Capability Assessment of Readiness	Available from Clay Spangenburg at FEMA at (202) 646-3750
1 through 10, except 6	Federal Emergency Management Agency (FEMA)		Local Capability Assessment of Readiness	Available from Clay Spangenburg at FEMA at (202) 646-3750
1 through 10, except 6	Federal Emergency Management Agency (FEMA)		Tribal Capability Assessment of Readiness	Available from Clay Spangenburg at FEMA at (202) 646-3750
1 through 10, except 6	Federal Emergency Management Agency (FEMA)		Emergency Management Performance Grant Program	Contact Dwight Poe at Office of Domestic Preparedness at (202) 786-9784
1 through 10, except 6	Federal Emergency Management Agency (FEMA)		SLG 101 State and Local Guide for All Hazard Emergency Operations Planning	Available for order from the FEMA Warehouse at 1 800 480-2520 or online at http://www.fema.gov/rrr/gaheop.shtm

9, 10	Federal Emergency Management Agency (FEMA)		Interim Guidance on Continuity of Operations Planning for State and Local Governments And Federal Preparedness Circular 65 (June 15, 2004)	FEMA's Office of National Security Coordination. Contact Rex Wamsley.
1 through 10, except 6	International Association of Emergency Managers (IAEM)		Emergency Program Manager Knowledges, Skills and Abilities	Basis for the International Association of Emergency Managers Certified Emergency Manager credential. Available from Sharon Kelly at IAEM (703) 538-1795 or Tom Gilboy at EMI at (301) 447-1535.
1 through 10	National Fire Protection Association (NFPA)	NFPA 1600	Standards on Disaster and Emergency Management and Business Continuity Programs	Specifies the minimum requirements for business continuity and emergency management programs
Freely available on NFPA website (www.nfpa.org)
	National Governors Association (NGA)		A Governor's Guide for Emergency Management (Volumes One and Two)	
1 through 10	U.S. Department of Homeland Security (DHS)		National Response Plan (NRP)	http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml
1 through 10	U.S. Department of Homeland Security (DHS)		National Incident Management System (NIMS)	http://www.fema.gov/pdf/nims/nims_doc_full.pdf

1 through 10, except 6	U.S. Department of Homeland Security (DHS)	44 CFR 360	State Assistance Programs for Training and Education in Comprehensive Emergency Management	For state and local governments
1, 3, 4, 5, 8, 9, 10	U.S. Department of Transportation/Federal Emergency Management Agency (DoT/FEMA)		HMEP Guidelines for Hazmat/WMD Response, Planning and Prevention Training	http://www.usfa.fema.gov/subjects/hazmat/hmep.shtm

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
Federal First Responders				
1 through 10	Federal Emergency Management Agency (FEMA)		National Incident Management System	http://www.fema.gov/nims
1 through 10	U.S. Department of Homeland Security (DHS)		National Response Plan (NRP)	http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml
1 through 10	U.S. Department of Homeland Security (DHS)		National Incident Management System (NIMS)	http://www.fema.gov/pdf/nims/nims_doc_full.pdf
1, 3, 4, 5, 8, 9, 10	U.S. Department of Transportation/Federal Emergency Management Agency (DoT/FEMA)		HMEP Guidelines for Hazmat/WMD Response, Planning and Prevention Training	http://www.usfa.fema.gov/subjects/hazmat/hmep.shtm

Capability	Organization	Designation (if applicable)	Title	Comments/Scope (include URL if publicly available)
Groups Involved with Accreditation (first responder training, not individuals)				
	Accreditation Council for Continuing Medical Education (ACCME)			The ACCME's Mission is the identification, development, and promotion of standards for quality continuing medical education (CME) utilized by physicians in their maintenance of competence and incorporation of new knowledge to improve quality medical care for patients and their communities.
	Accreditation Council for Graduate Medical Education (ACGME)			ACGME is responsible for the Accreditation of post-MD medical training programs within the United States. Accreditation is accomplished through a peer review process and is based upon established standards and guidelines
	American Council on Education (ACE)			Accredits courses
	American National Standards Institute (ANSI)			Accredits personnel certification agencies using ISO 17024.
	American Public Works Association (APWA)			
	Commission On Accreditation Of Ambulance Services (CAAS)			EMS accreditation
	Commission on Accreditation of Law Enforcement Agencies (CALEA)			Law enforcement accreditation

	Commission on Fire Accreditation International (CFAI)			
	International Association for Continuing Education Training (IACET)			CEUs
	International Association of Emergency Managers (IAEM)			Certified Emergency Manager® Program. Credentialing program developed with FEMA support to recognize qualifications of emergency management professionals.
	International Fire Service Accreditation Congress (IFSAC)			http://www.ifsac.org/
	National Board on Fire Service Professional Qualifications (Pro Board)			http://www.theproboard.org/

Summary of Responses to ANSI-HSSP Workshop Survey

Training Programs for First Responders

January 27, 2004

The following is a summary of the responses to the ANSI-HSSP's letter and written survey distributed to first responder organizations. The survey requested assistance in identifying existing and needed training standards for first responders, as well as existing and required associated accreditation bodies.

Forty-four (44) organizations completed and returned the ANSI-HSSP training survey. Responses came from U.S. city, county and state first responder agencies, national government agencies, private, government, and university based first responder training entities and non-profit organizations serving first responders. Responses were also received from Berlin's Fire Department in Germany and Montreal's Fire Department in Quebec, Canada.

The survey defined "First responders" to include: fire fighters, emergency medical services, law enforcement, health care, public health, and emergency management personnel. Most of the responses came from fire departments and emergency management agencies. Though some of these are responsible for managing the emergency medical response, no survey responses came from agencies specifically and exclusively responsible for health care or public health.

Responses were received from the following organizations:

Advanced Tactical Security
Arizona Division of Emergency Management
Arkansas Department of Emergency Management
Berliner Feuerwehr - Berlin Fire Department
Boston Fire Department
Charlotte Fire Department
City of Denton, TX
Department of Public Safety - Fire Division
Des Moines Fire Department
Disaster Survival Planning Network
EAI Corporation (2)
Federal Law Enforcement Training Center, U.S. Department of Homeland Security
Flagstaff Fire Department
Hawaii State Civil Defense
Honolulu Fire Department
Iowa Homeland Security & Emergency Management Division
Life Goes On
Los Angeles County Fire Department

Mahaska County Emergency Management Agency (IA)
Maryland Fire and Rescue Institute
Massachusetts Emergency Management Agency (MEMA)
Missouri State Emergency Management Agency
Montréal Fire Department
National Volunteer Fire Council
New Jersey Department of Human Services
New Jersey State Police/ Office of Emergency Management – Domestic
Preparedness/Hazardous Materials Emergency Response Planning Unit
City of New Rochelle Department of Public Works
North Valley Hills Forest Fire Crew, Inc.
City of Oakland Fire Department (CA)
Ohio Emergency Management Agency
Olathe, KS Fire Dept.
Oregon Emergency Management
Phoenix Fire Department
Phoenix Police Department
Plano Fire/Rescue (TX)
Sacramento County Sheriff
South Carolina Emergency Management Division
South Central PA Counter-Terrorism Task Force
Texas Engineering Extension Service, Texas A&M University System
U.S. Department of Energy
U.S. Department of Homeland Security, Environmental Measurements Laboratory
United States Fire Administration, FEMA, US DHS – NFA and EMI
Utah Division of Emergency Services & Homeland Security
Washington Military Department Emergency Management Division

Do you employ first responders?

27 Yes, 17 No

A few of the organizations that replied "Yes" employ first responders in their capacity as trainers or consultants, not in their capacity as first responders.

If so, what are their titles or job functions?

The most frequently mentioned job titles were Firefighters and EMTs. Also listed were Hazmat Responders, Police Officers, Paramedics, Special Rescue, Bomb Squad, K-9, CSI, Detectives, trained security officers, operators of boats and helicopters, lifeguards, nurses, Field Monitoring Teams (FMT), emergency communications personnel, non-emergency services professionals and technical persons such as engineers, FLETC Security Force (Special Police), FLETC (FRU) First Response Unit (Chemical, Biological and Radiological response team), urban search and rescue, Marine Engineer, Airport (Special Operations), Rope and trench rescue and Water rescue.

Headcounts in each category ranged from as few as 25 to as many as 4,000+ total staff and/or volunteers. Entities that responded were, in some cases, only responsible for training their own staff and, in other cases, for training the staffs of other first responder agencies.

Does your organization train first responders on homeland security topics? If yes, how many and what types of people do you train annually?

41 Yes, 3 No

Among the trainees listed were emergency responders from: local, state and federal law enforcement personnel, fire service, HazMat, Public Works, Public Health, Healthcare, Emergency Management, Environmental Administration, Public Safety Communications, Agriculture, ER physicians and nurses, key local and state government staff and officials, bomb squad, EMS, school nurses, school officials, public affairs, elected and appointed officials, school officials, students, colleges and universities, humanitarian organizations, Red Cross, military personnel, lay people, National Guard, lifeguards, members of the private sector, and security officers.

Did you create your own training programs on homeland security topics for first responders?
If so, what homeland security related training programs have you developed?

24 Yes, 19 No, 1 N/A

Training programs listed by respondents included the following:

- Terrorism Awareness Operations
- Creating Business Continuity Plans
  Community Emergency Response Team (CERT) training
  First Responder Terrorism - Consequence Management
- Emergency Response to Terrorism: Basic Concepts Course
- History, Concepts, Response, Awareness
- Specialized training for Metropolitan Medical Response
- Trainings specific to the equipment of each profession
- Personal Protective Equipment and Awareness
- Chemical protective clothing for firefighters
  Decon programs: Mass Decontam, Rapid Removal of Victims, Haz-mat ops
- Hazmat for Law Enforcement/EMS - Awareness and Operations Levels
  Emergency Response to Terrorism Bombings
- Technical assistance trainings on radiation
- WMD Responder Awareness Course
- MERRTT program to train responders to a transportation accident involving radioactive materials
- Hospital Preparedness and Exercises
  NFA's Emergency Response to Terrorism (ERT) series includes: Basic Concepts; Strategic Considerations for Command Officers; Tactical Considerations for Company Officers; Tactical Considerations for Emergency Medical Services; Tactical Considerations for Hazardous Materials.
- EMI's Homeland Security Planning Course, and the Integrated Emergency Management Course: Homeland Security.

- Terrorism Overview/Terrorism Strategies and Tactics
- Weapons of Mass Destruction/Hazmat Ops
- Bomb Threat Management
- Weapons and Explosives Detection
- Physical Security Equipment
- Trainings specific to security officers such as: General Security Alert, Suspicious Events
- Crowded Events, Terrorism Tips and Alerts, Departmental Coop LeD and Fire
- Workshops targeted towards specific regional threats and needs
- A few of the respondents mentioned adapting pre-existing training programs to the specific needs of their trainees.

Do you use homeland security training materials developed by others to train your first responders?
What training programs do you use provided by others?

33 Yes, 10 No, 1 N/A

Respondents answered this question in a two different ways. They either wrote that they conducted trainings created by the following institutions:

Trainings developed by the Office for Domestic Preparedness, Federal Emergency Management Administration, Department of Homeland Security, Environmental Protection Agency, Department of Defense, NEA, Department of Justice, National Fire Academy, National Wildfire Coordinating Group, Center for Domestic Preparedness, Cambridge Group, commercial vendors and private instructors, Energetic Materials Research and Testing Center (EMRTC), a division of the New Mexico Institute of Mining and Technology (New Mexico Tech), The National Emergency Response and Rescue Training Center (NERRTC), which is part of the National Domestic Preparedness (Consortium (NDPC), established by the Texas Engineering Extension Service (TEEX), California Specialized Training Institute (CSTI) in the Office of Emergency Services, and the LA City Fire Department, Delmar Thompson Learning Terrorism Preparedness Library, Special Operations for Terrorism and HazMat Crimes - ISFSC - Red Hat Publishing Company, Inc., NWCG ICS, Incident Response to Terrorist Bombings Awareness.

Or respondents listed specific trainings or target groups for trainings:

Terrorism Hospital Provider, EMS Tech, RTI:BC, ERTI:CO, ERTI:HM, Explosives Response, Awareness, Operations, ER:TC Incidents, WMD Detection, Incident Management/Unified Command WMD, Crime Scene Management WMD, ERDBI, Radiological Training, HazMat and Bomb Squad Training, Firefighting courses, Incident Response to Terrorism Bombings – Awareness Class, AHA CPR, FA, AED & Blood borne Pathogens, CERT, Floor Warden Program, First Responder Hazmat, California State SAC Terrorism, Consequence Management, Hazmat Technician/Specialist, HazMat Awareness/Response with a WMD Component, Emergency Response to Terrorism Courses, Domestic Preparedness, Basics of Terrorism/WMD, ODP's Domestic Preparedness Equipment Technical Assistance Program (DPETAP), Radiological/Nuclear Responder Operations Course, and the curriculum provided by DOD under the Nunn-Lugar-Domenici Program (ODP assumed management of the Nunn-Lugar-Domenici (NLD) Domestic Preparedness Program from the Department of Defense (DoD)) the program relates to WMD domestic preparedness. EMRTC Incident Response to Terrorist Bombings, Cobra, FBI Bomb

School, State and Local Terrorist Training, Response to Terrorist Events, USAR Team Response, MMRS Response

Who is the developer of these materials?

Member organizations of the National Domestic Preparedness Consortium (NDPC) TEEX, LSO, CRA, SAIC, Bechtel, NM Tech, etc.
Staff, LSU, ODP, UTD, DOD, DOE
NEA
FEMA for HazMat,
FBI or ATF for Bomb Squad.
PHS
EPA
CDC
LSU
Discovery Channel
National Fire Academy
Department of Homeland Security
LA Fire Department
AHA
American Red Cross
California Specialized Training Institute in the OES
Iowa State Fire Service
USFA
RAM & Associates
Louisiana State University
DOE Nevada Test Site
Private industries such as Dupont and 3M
N.E.R.T.C. Emergency Management Institute
Counter Terrorism Operations Support – Bechtel Nevada
National Wildfire Coordinating Group
MERRTT was developed by representatives from the Transportation External Coordination Working Group (several states, IAFC, IAFF, ENA, ACEP, NAEMT)
Contractors to ODP, DOJ and OES
ODP
AZ POST
Phoenix Fire
IAFF

Do the homeland security training programs you use conform to any standards? If so, what standards do they comply with and who are the developers of those standards?

25 Yes all, 12 Yes some, 3 No none, 1 Not sure, 3 N/A

Most frequent mentions were made of DHS/ODP, FEMA, NFPA and OSHA

Also listed were:
NIOSH, DOE, EPA, JCAHO
DOJ
Basic Haz-Mat
NFPC 1710; ATF/FBI and FEMA/EMI.
NEPA
CBCP certification standards by DRII
NFPA 473, 29 CFR 1910.120, DoDI 2000.12, -.14, -.16, -.18, DOJ guidelines
DoD and U.S. Fire Administration
AHA
NFPA 472 Professional Competence of Responders to Hazardous Materials Incidents and the
DHS/ODP Emergency Responder Guidelines
ODP WMD Training Program – Catalog February 2003
NDPC
IAFF
USAR
AZ POST
OJP

Regulations and standards used include OSHA 1910.120, Municipal Public Safety Officers
Certification Panel (PA-specific for law enforcement), and PA Emergency Management Agency
(PEMA). PEMA standards are essentially a PA version of the ODP Emergency Responder
Guidelines.
Appendix A of FEMA's Compendium of Terrorism Training, dated April 10, 2002
DHD-ODP published Responder Guidelines to review WMD training for course content
MERRTT program meets the competencies outlined in NFPA 471, 472 and 473
Federal regulations as defined in the Code of Federal Regulations
U.S. DHS, Office of Compliance, Research and Development Division

Office of Training Support, Research Evaluation Division, FLETC, US Department of Homeland
Security

One respondent noted, "There are no established standards for the Emergency Management
professional."

*Are the homeland security related training programs you use accredited by a third party? If yes, who are
the accrediting bodies?*

12 Yes all, 15 Yes some, 9 No none, 8 N/A

DOE, DOD, DHS, ODP, FEMA, IAFC, NFPA, OSHA, JCAHO, DRII, AHA
Massachusetts Fire Academy
Methodist Hospital in Fort Worth for EMS
Jacksonville University
National Board of Fire Service Professional Qualifications
National Fire Academy
CA State OES/SAC

Iowa State Homeland Security and Emergency Management Division
Maryland Fire Service Personnel Qualifications Board accredited by the National Board for Fire
Service Professional Qualifications AND the International Fire Service Accreditation Congress
American Council on Education
Peace Officer Standards (POST)
Department of Public Safety Standards and Training
Municipal Public Safety Officers Certification Panel
PA Emergency Management Agency (PEMA)
The Continuing Education Coordination Board for Emergency Medical Service (CECBEMS)
International Association of Fire Service Instructors publishes the Special Operations textbook from
Oklahoma State University
German Red Cross (DRK) Berlin Section – Disaster-Management
International Life Saving Federation (ILS) – Berlin Section (DLRG) – Disaster Management

NFA courses are reviewed for compliance with NFPA standards by an independent committee

representing State fire training directors and large city fire departments

AZPOST
IAFF
College (Canada)

What training programs would you like to see for first responders related to homeland security issues that are not available today?

Four respondents mentioned that there is a sufficient number of programs available and just suggested that these be kept up to date.

Other respondents suggested the need for trainings in the following areas:

Prevention & deterrence/mitigation of WMD CBRNE Terrorism Incidents
ICS Interagency Terrorism Training for urban areas
Mass Decontam; Use of structural PPE on VMD Events
For first responders in specific professions, i.e. police officers, firefighters, EMTs, and paramedics
Evidence Preservation and Forensics
EMAP assessment training
Comprehensive inter-disciplinary standards that address all aspects of response to a WMD –
encompassing the integrated response from all members of the emergency response community
Inspection activities for critical facilities and Blast Protection
Maritime Container Inspection
Law Enforcement Negotiation
Counter-Terrorism Training
First Responder Training with use of Standard Bunker or Turnout Gear
Detection and Determination of an Incident
Incident command, unified command, and rescue; structural collapse, search, plans development
Operations level courses for Emergency Responders
Homeland Security for institutional environments, i.e. mental and developmental facilities, etc

The role of public works and labor staff in Terrorism/WMD events
Critical Incident Stress Management
Decontamination (hands on) for first responders
Public Safety Communications
Reduce the fears of the public regarding "dirty bombs" and radioactivity
Management of large-scale events that have multi-jurisdiction impacts
Operations Security (OPSEC)
Train-the-trainer programs for WMD response equipment (should include equipment manufacturers, workplace safety regulators (OSHA and state counterparts), and the emergency response community)
Manufacturing, use and maintenance of equipment used to respond to WMD occurrences
Mandatory Air Monitoring training related to Radiological, Biological, and Chemical WMD Agents - DPETAP offers programs to fire departments thru Pine Bluff Arsenal.
A special training program for incident commanders managing operational tasks i.e. expansion of nuclear, biological or chemical agents.
Training for non traditional responders in the public health and health care disciplines
Training programs "post traumatic stress syndromes" have to be improved
Intelligence Gathering and Communication Systems
Communications Interoperability
Operationalizing Intel.
EOC Operations
Infrastructure Protection
Identification of Fraud and Crimes by Misdirection
Expanded command and control especially with state and federal agencies
Programs dealing with community issues

"It is difficult to identify training programs that we would like to see in the future. Currently there is no agreed-upon set of competencies required for response to terrorism events. Absent that agreement, each group of responders will develop their own."

Who should develop these new training programs?

Member organizations of the NDPC, U.S. Fire Academy, DHS, NFA, Emergency Management Institute, FEMA, DoJ, ODP (repeated support for this agency), Professional contractors, EAI, NFPA, Construction Engineers, Police, SBCCOM, Contractors such as TEEX, International Critical Incident Stress Foundation, Ellicot City, MD, Dept. of Energy, OPSEC – IOSS

Fire Service professionals in conjunction with Federal agencies (FEMA, DHS, NFPA, CDC)

The National Domestic Preparedness Consortium (NDPC) under the direction of DHS/ODP

DHS-ODP in conjunction with the emergency response community, equipment manufacturers, and workplace safety regulators should be the development team for any new training programs for emergency responders.

Subject matter experts from Public Safety, Military and related industries

CDC for public health and professional accreditation organizations for health care professionals. ACEP, ENA etc.

"All programs need to be locally based and need to include local, regional, and state representatives."

Who should accredit these new training programs?

ODP (repeated support for this agency), U.S. Fire Academy, DHS, NFA, Emergency Management Institute, FEMA, DOE (radioactivity), DOT, DOJ, DOD, IAEM, University for CEU/CME, Building Code Standards, EMAP, DHS, local states, University Of Maryland, Baltimore County, NFPA

"If lead to certification, then the state certification program accredited by the national organizations, as well as academic review by the American Council on Education."

"One concern with accreditation is a limiting of flexibility in field delivered courses to target audiences. Accreditation tends to lead to issues of legally defensible curriculum and rigid single set courses."

"Individual state-accreditation bodies. This process is already followed for National Fire academy courses that are developed by NFA, adopted by the states, and used to meet professional competency standards, such as NFPA."

District commanders in charge (B- und C-Dienst)

The (health) professional organizations who require regular re-certification of credentials

National Board on Professional Fire Service Qualifications - ProBoard (NPQB) and International Fire Service Accreditation Congress - (IFSAC)

Appropriate Federal Agencies as well as Fire and Police national organizations

Existing fire, law enforcement, and emergency management accreditation agencies.

Please list any other homeland security related first responder training programs that you are aware of, but do not use, that are highly regarded; include names of associated developing and accrediting organizations, if known.

New Mexico Tech explosives course, Center Disease Control (CDC), Center for Domestic Preparedness, Anniston, AL, National Fire Academy, FLETC, Emergency Management Institute, International Association of Fire Fighters (IAFF), International Fire Service Training Association (IFSTA), ODP First Responder and other programs
FEMA/EMI

"Ohio has some outstanding programs: The University of Findlay's Center for Terrorism Preparedness, Ohio State University's Office of International and Homeland Security educational,

training and outreach programs, University of Akron's Center for Emergency Management and Homeland Security Policy, and the Ohio Homeland Security Training Alliance has been created as a collaboration of all parties involved in training the state's first responder community to react to and manage incidents of terrorism. In addition, many Ohio community colleges, such as Cleveland State, Cuyahoga Community College and Owens Technical College have outstanding fire, EMS and police training programs."

Critical Incident Response to Terrorist Seminars - Developed by NIJ/TSWG (National Institute of Justice/Technical Support Working Group)

NDPC member institutions with training programs include: Louisiana State University, New Mexico Tech, Center for Domestic Preparedness, and the Nevada Test Site.

TEEX ESRI - Unified Command
IAFF Emergency Response to Terrorism: Operations
(1) Emergency Response To Terrorism: Basic concepts By U.S. Dept. Of Justice & Federal Emergency Management Agency
(2) Training Programs by German Bundeswehr

The Office of Domestic Preparedness funded the development of the ERT: Basic Concepts course, which they also use, but to our knowledge, ODP is not an accredited institution. On the website: http://www.fema.gov/compendium/index.jsp
I.A.E.M., IA
Consortium of Sandia Labs in New Mexico
Bechtel Nevada
Texas A&M.

Do you have other comments or suggestions regarding homeland security related training programs for first responders including the programs currently available?

"More programs that can be handed off to locals."

"CERT training should be standardized nation-wide. All instructors should be required to attend a L or G 417 course from FEMA; Have regional or state-wide ID badges and equipment bags with equipment. Right now everyone does their own and it may or may not command respect from first responders. Oklahoma uses a state-wide program that has standardized training; ID badges; CERT bags and vests."

"If this is similar to existing hazmat or WMD training courses then specific content about homeland security issues."

"Many programs are OK in the response area, but weak in the WMD technology area. Authors have only a basic understanding of the issues."

"Many of the Federal and State regulations and procedures are based on a HAZMAT situation where there is time to go to the highest level of protection. This approach will cost victims lives in a terrorism situation."

"As stated in question #9 the quality of training provided varies so much that it is a concern."

"More focus on collapse structure --bombs!-Personnel or Vehicle Explosive Devices"

"At this point in time it appears that there is not a great deal of federal coordination of the effort to train first responders without a great deal of redundancy at the state's levels."

"In answer to Q 13, respondent wrote "Yes, if the agenda is determined to meet our needs"

"While Homeland Security programs are advertised as being available for all "first responders", in reality they are not. As the above answers indicate, our police, fire, EMTs, Hazmat and emergency managers are excluded, as they are not "locals" or "state police". The problem with the training is that it is selective. Training and monies for this must be tied to a wider audience, and not allowed to be restricted."

"Training needs to extend beyond traditional police/fire/EMS personnel. Those working on the fringe of events need to be comfortable and understand their role in mitigating such events."

"Based on the nature of the threat we should expand the audience. There should be more emphasis on handling special needs population, i.e., schools and nursing homes and how the public can assist the first responder community."

"Training should be available to be presented in the jurisdiction requesting it. Maybe provide more "Train the Trainer" programs. We feel it is important to provide first responder training and are always looking for ways to improve."

"Don't try to reinvent the wheel. There are already good courses and accepted accredited processes that exist. Build on what's already out there."

"Threat should drive the training curriculum. We (the US in a country) spend a lot of time and money on what WE think is the threat (e.g., chemical weapons), rather than what the demonstrated threat has been and continues to be (suicide bombings, use of IED's, etc.). There needs to be a balance."

"Look at what is already out there. NFPA has some good processes that already exist."

"The central focus for WMD terrorism training has been established in DHS/ODP. This central agency should be the coordinating body for all WMD terrorism training for the nation. Centralize this as far as curriculum development is concerned using the DHS/ODP WMD Terrorism Training Strategy."

"Serious consideration should be given to developing standardized training program content requirements (objectives). A compendium of existing equivalent training program should also be developed."

"RAND Study - Lessons Learned from Terrorism Incidents should be addressed"

"There is a definite need to standardize the training that is currently available. In addition, professional organizations should begin to mandate certain basic level training for their constituents. This would include healthcare and public health professionals as well as the traditional first responders. Agency executives and elected officials who control funding for response agencies should have some basic training in WMD preparedness and response so they can understand the issues associated with funding."

"We need modern multimedia material (pictures, videos, films) to support existing training material. Training programs "post traumatic stress syndromes" have to be improved."

"See compendium list on the website: http://www.fema.gov/compendium/index.jsp"

"It is our observation, based on our participation in the Murrah Building explosion in Oklahoma City, the World Trade Center attacks in 1993 and in 2001, and the Pentagon attacks in 2001, that the preponderance of skills, knowledge and abilities needed at these events require basic day-to-day fire, emergency management, law enforcement and emergency medicine be principally day-to-day skills. The training that is required for terrorism has to do with the special nature of the event - the fact that there is "intelligence" behind it, and issues like secondary events, concurrent biological or hazardous materials dispersal, mass casualties, scene and crowd control, the National Response Plan, NIMS and the like."

"Professional security officers should be provided a continuous schedule of up-dated training to remain aware in security related changes. These men should also (with proper training) be granted arrest authority for their particular post."

"FLETC offers a wide array of different programs pertaining to anti-terrorism and counterterrorism, both for basic and advanced federal law enforcement training. FLETC also has an Office of State and Local Training that offers a number of different first responder training for non-federal law enforcement personnel."

"Every effort should be made to standardize training and certify courses and instructors at a State/National Level."

"Efforts should be made to coordinate and standardize the programs being offered throughout the nation"

Revising the DHS Target Capabilities List (TCL)

DHS is in the process of modifying the TCL groupings from 10 down to 7 and was soliciting additional input and comments during the fourth quarter of 2005. The draft TCL grouping list follows with the number of and name of individual capabilities shown parenthetically:

1. Common Capabilities (4- Planning, Interoperable communications; Citizen preparedness & participation; Risk management)
2. Prevention & Deterrence (5-Information gathering & recognition of indicators & warnings; Intelligence analysis & production; Intelligence information sharing & dissemination; Law enforcement investigations & operations; CBRNE detection)
3. Protection (3-Animal health emergency support; Food & agriculture safety & defense; Critical infrastructure protection)
4. Emergency Management (6-Citizen protection-evacuation or in-place protection; Critical resource logistics & distribution; EOC management; Mass public information & warning; Mass care-sheltering, feeding, & related services; Volunteer management & donations)
5. Hazard Response (7- Firefighting ops/support; Urban search & rescue; WMD/hazmat response & decontamination; On-site incident management; Explosive device response operations; Public safety & security response; Responder health & safety)
6. Public Health and Medical (8- Environmental health &vector control; Medical supplies management & distribution; Medical surge; Triage & pre-hospital treatment; Fatality management; Public health epidemiological investigation & lab testing; Isolation & quarantine; Mass prophylaxis)
7. Recovery (3- Economic & community recovery; Restoration & lifelines; Structural damage and mitigation assessment)