Module Objectives

• Discuss plans, systems, guidelines, and programs that guide the role of environmental health during the four phases of the emergency management cycle.
• Identify emergency preparedness, response, recovery, and mitigation resources for environmental health.
• Describe the structures and parameters in which environmental health will function during an emergency or disaster.
• Describe public health emergency preparedness and response in Massachusetts.

The Stafford Act

• Robert T. Stafford Disaster Relief & Emergency Assistance Act (1988)
• Amended version of Disaster Relief Act of 1974
• Provides statutory authority for most Federal disaster response activities
• Triggered by Presidential Disaster Declaration
• Financial & physical assistance through FEMA

PPD-8: National Preparedness

• Video
• Replaces HSPD-8 (National Preparedness)
• Aimed at strengthening the security and resilience of the United States through systematic preparation for the threats that pose the greatest risk to the security of the Nation, including acts of terrorism, cyber attacks, pandemics, and catastrophic natural disasters.
• Directs development of
  – National Preparedness Goal
  – National Preparedness System
  – Campaign to Build and Sustain Preparedness
  – National Preparedness Report (annually)

National Preparedness Goal

Success defined as “A secure and resilient Nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk.”
National Preparedness Goal

- Provides a unifying framework that integrates a range of efforts designed to enhance the safety of our nation’s critical infrastructure.
- Goal is to build a safer, more secure, and more resilient America by preventing, deterring, neutralizing, or mitigating the effects of a terrorist attack or natural disaster, and to strengthen national preparedness, response, and recovery in the event of an emergency.
- 18 critical infrastructure sectors each with a Sector-Specific Agency (SSA) and Sector-Specific Plan (SSP)

National Infrastructure Protection Plan (NIPP)

- Provides a unifying framework that integrates a range of efforts designed to enhance the safety of our nation’s critical infrastructure.
- Goal is to build a safer, more secure, and more resilient America by preventing, deterring, neutralizing, or mitigating the effects of a terrorist attack or natural disaster, and to strengthen national preparedness, response, and recovery in the event of an emergency.
- 18 critical infrastructure sectors each with a Sector-Specific Agency (SSA) and Sector-Specific Plan (SSP)

National Response Framework (NRF)

- Comprehensive, national, all-hazards approach to domestic incident response
- Overview of key response principles, roles, and structures that guide national response
- Contains Emergency Support Functions (ESFs) and support and incident annexes
- Replaces the National Response Plan (NRP)

Emergency Support Functions (ESFs)

- ESF #1 – Transportation
- ESF #2 – Communications
- ESF #3 – Public Works & Engineering
- ESF #4 – Firefighting
- ESF #5 – Emergency Management
- ESF #6 – Mass Care, Emergency Assistance, Housing & Human Services
- ESF #7 – Resource Support
- ESF #8 – Public Health & Medical Services
- ESF #9 – Search & Rescue
- ESF #10 – Oil & Hazardous Materials Response
- ESF #11 – Agriculture & Natural Resources
- ESF #12 – Energy
- ESF #13 – Public Safety & Security
- ESF #14 – Long-term Community Recovery
- ESF #15 – External Affairs
National Disaster Recovery Framework (NDRF)

- Consistent with the vision set forth in PPD-8
- Enables effective recovery support to disaster impacted states, Tribes, Territorial, and local jurisdictions
- Provides a flexible structure for disaster recovery managers to operate in a unified and collaborative manner
- Focuses on how to restore, redevelop, and revitalize the health, social, economic, natural, and environmental fabric of the community and build a more resilient Nation
- First framework published under PPD-8 reflecting the core recovery capabilities by supporting operational plans as an integral element of a National Preparedness System

Recovery Support Functions (RSFs) and Lead Coordinating Agencies

- Community Planning and Capacity Building (FEMA)
- Economic (Commerce)
- Health and Social Services (HHS)
- Housing (HUD)
- Infrastructure Systems (USACE)
- Natural and Cultural Resources (DOI)

National Incident Management System (NIMS)

- Comprehensive, national approach to incident management
- Standardized organizational structures
- Applicable to
  - All jurisdictional levels & functional disciplines
  - All incidents and hazards
  - Public and private entities

Incident Command System (ICS)

- Standard, on-scene, all-hazard incident management system
- Features include
  - Common terminology
  - Organizational resources
  - Manageable span of control
  - Organizational facilities
  - Use of position titles
  - Incident Action Plan (IAP)
  - Integrated communications
  - Accountability
HHS Office of the Assistant Secretary for Preparedness and Response (ASPR)

- Federal lead for ESF-8 activities
- Office of Preparedness and Emergency Operations (OPEO)
  - Secretary’s Emergency Operations Center (SOC)
  - Incident Response Coordination Team (IRCT)
  - Planning and evaluation of exercises
  - Coordination of HHS COOP and COG programs
  - National Disaster Medical System (NDMS)
- Regional Emergency Coordinators (RECs)

National Strategic Plan for Public Health Preparedness and Response

Guide for CDC, the entire public health system, and its stakeholders to secure the health of the nation and attain the plan’s collective 2020 vision of “people’s health protected – public health secured”.
CDC Public Health Preparedness Capabilities

Creates national standards for public health preparedness capability-based planning and assists state and local planners in identifying gaps in preparedness, determining specific jurisdictional priorities, and developing plans for building and sustaining capabilities.

1. Community Preparedness
2. Community Recovery
3. Emergency Operations Coordination
4. Emergency Public Information and Warning
5. Fatality Management
6. Information Sharing
7. Mass Care
8. Medical Countermeasure Dispensing
9. Medical Material Management & Distribution
10. Medical Surge
11. Non-pharmaceutical Interventions
12. Public Health Laboratory Testing
13. Public Health Surveillance and Epidemiological Investigation
14. Responder Safety & Health
15. Volunteer Management

Comprehensive Preparedness Guide (CPG) 101

- Response and recovery planning guidance for state, territorial, tribal, and local governments.
- Extends to prevention and protection mission areas.
- Guidance on emergency operations plan (EOP) development.
- Integrates concepts from NIMS, NRF, NIPP, lessons learned, and other plans, guidance, and activities.
- Replaces State and Local Guide (SLG) 101

Emergency Operations Plan (EOP)

- All hazards
- The basic plan
- Functional annexes
  - Focus on critical emergency functions
  - Communications, evacuation, mass care, health & medical services, environmental health, etc.
- Incident/hazard specific appendices
  - Based on hazard vulnerability assessment (HVA)
  - Tornado, earthquake, hurricane, terrorism, etc.

Other Parts of the EOP (continued)

- Standard Operating Procedures (SOPs)
  - Provide detailed instructions to fulfill responsibilities & perform tasks in the EOP
  - May or may not be attached to EOP
- Standard Operating Guidelines (SOGs)
  - Similar to SOPs, but less prescriptive
  - Guidelines/guidance vs. procedures
  - Accountability/liability factor

The Planning Process

- More important than the plan itself
- Don’t “reinvent the wheel”
- Don’t go it alone... use a team approach
- Don’t forget the politicians and administrators
- Plan development, validation & maintenance
- Continuous process
Credentialing for Emergency Response

- NIMS process for validating personnel qualifications and providing authorization to perform specific functions & to have access to an incident involving mutual aid.
- Process entails objective evaluation of:
  - Certification, license, or degree
  - Training and experience
  - Competence or proficiency to meet nationally accepted standards, provide particular services and/or functions, or perform specific tasks under specific conditions during an incident

(continued)

- National Emergency Responder Credentialing System will document minimum professional qualifications, certifications, training, and education requirements that define the standards required for specific emergency response functional positions.
- Three NIMS environmental health job credentialing titles for emergency response

9. Environmental Health Generalist

<table>
<thead>
<tr>
<th>Definition</th>
<th>The primary purpose of the Environmental Health Generalist is to independently measure risk based on criteria such as water, waste, indoor air, and radiation and recommend or take action to respond and mitigate the threat.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Bachelor's degree in natural or physical sciences or engineering.</td>
</tr>
<tr>
<td>Experience</td>
<td>1. More than 5 years experience in Environmental Health or equivalent.</td>
</tr>
<tr>
<td>Certification</td>
<td>None required.</td>
</tr>
</tbody>
</table>

10. Environmental Health Specialist

<table>
<thead>
<tr>
<th>Description</th>
<th>The primary purpose of the Environmental Health Specialist is to provide professional guidance on specific areas such as environmental systems engineering, occupational exposure assessment, dose estimation, and air quality.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Bachelor’s degree with 2 years experience</td>
</tr>
<tr>
<td>Training</td>
<td>Completion of the following courses/credits: 1. Environmental Health and Protection, 2. Public Health and Medical.</td>
</tr>
<tr>
<td>Experience</td>
<td>1. Specialized, field experience in one of the above areas</td>
</tr>
<tr>
<td>Certification</td>
<td>None required.</td>
</tr>
</tbody>
</table>

11. Environmental Health Team Leader

<table>
<thead>
<tr>
<th>Description</th>
<th>Manages and provides professional guidance to teams of individuals conducting environmental health duties during a disaster, interfaces with emergency responders, other public health disciplines and communities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Bachelor’s degree in natural or physical sciences or engineering.</td>
</tr>
<tr>
<td>Experience</td>
<td>1. Experience as a member of an environmental health team during an incident or a full-scale exercise.</td>
</tr>
</tbody>
</table>

Resource Typing

- Categorization of personnel, resources, and assets according to specific criteria
- NIMS resource typing is based on
  - Category: Where a resource is most useful (e.g., Public Health and Medical)
  - Kind: Broad classes that characterize resources (Team)
  - Components: Elements that make up a resource
  - Metrics: Measurable standards
  - Type: Level of capability
- Environmental health resource type under Public Health and Medical category
EH Response Teams

- Several states already have or are developing these (AZ, CA, FL, GA, IA, IN, KY, LA)
- Based on NIMS credentialing & resource typing

Mutual Aid

- Agreements between agencies, organizations, and jurisdictions that provide a mechanism to quickly obtain emergency assistance in the form of personnel, equipment, materials, and other associated services.
- Primary objective is to facilitate rapid, short-term deployment of emergency support prior to, during, and after an incident.

Types of Mutual Aid Agreements

- International (e.g., PNEMA, IEMA-MOU)
- Regional (e.g. Great Lakes Border Health Initiative, Mid-America Alliance for Public Health Preparedness)
- State-to-State (e.g., EMAC)
- County-to-County
- City-to-City
- Interagency and Intra-agency
- Private Sector-to-Government

What Is EMAC?

- Video
- Voluntary interstate mutual aid compact
- Ratified by Congress and signed into law in 1996 (PL 104-321)
- Predecessor was Southern Regional Emergency Management Compact (SREMAC)
- 50 states, 3 territories (USVI, PR & Guam), and DC have enacted EMAC legislation
- Administered and managed by NEMA
- Mission: share resources during disasters
EMAC Mission Ready Packages (MRPs)

- 120 total – Designed to address
  - Mission
  - Limitations that might impact mission
  - Required support
  - Space needed to stage and complete mission
  - Estimated cost
- Based on NIMS credentialing and resource typing
- Three EMAC MRPs for EH

PUBLIC/PRIVATE WATER SUPPLY ASSESSMENT/INSPECTION PACKAGE

ONSITE WASTEWATER ASSESSMENT/INSPECTION PACKAGE

Unified Planning Coalition Together we are better...

Welcome to the Region ZY ES&F Unified Planning Coalition...

The Region ZY ES&F (Unified Planning Coalition) is a coordinated public health and medical preparedness and response organization dedicated to planning and the development of partnerships.

Visit the CDC website for more information on Emergency Preparedness and Response.

CDC Support for the Emergency Management Assistance Compact (EMAC)
Homeland Security Exercise and Evaluation Program (HSEEP)

- Capabilities and performance-based exercise program
- Provides a standardized methodology and terminology for exercise design, development, conduct, evaluation, and improvement planning
- Constitutes a national standard for all exercises
- Exercise Evaluation Guides (EEGs)
- After-action reviews and reports
- Corrective action planning

Exercises

Full-Scale Exercises

Functional Exercises

Drills

Games

Tabletop Exercises

Workshops

Seminars

Planning/Training

Discussion-Based

Overviews-Based

Environmental Health

Exhibit Evaluation Guide

Environmental Health is the capacity to protect the public from environmental hazards to improve the health and well-being of the population. This capacity includes the design, implementation, and enforcement of public health regulations. This guide provides a standardized methodology and terminology for exercise design, development, conduct, evaluation, and improvement planning. It provides a framework for improving the coordination and effectiveness of public health agencies in responding to environmental hazards.

Activity 1: Assess Environmental Health Operations

Activity Description: The assessment process begins with a review of existing environmental health assessment and response activities. Identify potential environmental health hazards and assess the effectiveness of response efforts.

Tasks Overview:

- Task 1: Identify environmental health hazards
- Task 2: Assess response efforts
- Task 3: Evaluate effectiveness of response efforts

Table: Task Completion

<table>
<thead>
<tr>
<th>Task</th>
<th>Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1: Identify environmental health hazards</td>
<td>2023-01-01</td>
<td>Completed</td>
</tr>
<tr>
<td>Task 2: Assess response efforts</td>
<td>2023-01-02</td>
<td>In Progress</td>
</tr>
<tr>
<td>Task 3: Evaluate effectiveness of response efforts</td>
<td>2023-01-03</td>
<td>Not Started</td>
</tr>
</tbody>
</table>

Activity 2: Direct Environmental Health Tactical Operations

Activity Description: The tactical operations process involves the deployment of resources to respond to environmental hazards. This process includes the coordination of resources, the assignment of tasks, and the execution of response efforts.

Tasks Overview:

- Task 1: Deploy resources
- Task 2: Assign tasks
- Task 3: Execute response efforts

Table: Task Completion

<table>
<thead>
<tr>
<th>Task</th>
<th>Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1: Deploy resources</td>
<td>2023-01-04</td>
<td>Completed</td>
</tr>
<tr>
<td>Task 2: Assign tasks</td>
<td>2023-01-05</td>
<td>In Progress</td>
</tr>
<tr>
<td>Task 3: Execute response efforts</td>
<td>2023-01-06</td>
<td>Not Started</td>
</tr>
</tbody>
</table>
Continuity of Operations (COOP) Planning

- Ensure continued performance of essential functions
- Reduce loss of life and minimize damage
- Ensure succession of key leadership
- Reduce/mitigate disruptions to operations
- Protect essential assets
- Achieve timely recovery/reconstitution to pre-event status
- Maintain a training program for validation

Facilities and Coordinating Centers

Incident Command Post (ICP)

- Physical location
- Tactical-level, on-scene incident command
- Located at or near incident site
- Can be fixed or mobile
- Typically comprises command and general staff, but can have other officials

Staging Area

- Usually temporary location
- Established by Operations Section Chief
- Can have multiple staging areas
- Positioning of resources awaiting assignment
- Manager assigned to each staging area by Operations Section Chief

Emergency Operations Center (EOC)

- Physical location
- Federal, state, & local levels
- Coordinates info. & resources
- Supports on-scene operations
- Can be organized by functional disciplines, jurisdictions, ICS, or a combination of all three
Joint Field Office (JFO)

- Primary federal incident management field structure
- Temporary facility
- Central location for coordination of response and short-term recovery efforts

- Organized, staffed & managed according to NIMS
- Led by Unified Coordination Group (UCG)

Joint Operations Center (JOC)

- Interagency command post
- Established by the Federal Bureau of Investigation (FBI)
- Manages terrorist threats and incidents
- Investigative and intelligence activities
- Coordinates with state, local, and tribal law enforcement and other agencies

Joint Information Center (JIC)

- Physical location
- Focal point for release of public information
- Established at or virtual connection to JFO, EOC, or other facility

- May be established at multiple locations
- Staffed by external affairs (ESF #15) personnel from various agencies

Public Health Emergency Preparedness in Massachusetts

- The Emergency Preparedness Bureau (EPB) is a unit of the Massachusetts Department of Public Health and has responsibility for policy-making and program coordination across all DPH emergency preparedness functions.

- EPB provides support to local health departments’ emergency preparedness efforts through the CDC Public Health Emergency Preparedness (PHEP) program and state funding.
Public Health Emergency Preparedness in Massachusetts

In 2011, CDC issued a new cooperative agreement through the PHEP program to fund public health preparedness.

The program is based on 15 **Capabilities**, which are national standards for public health preparedness capability-based planning and will assist state and local planners in identifying gaps in preparedness, determining the specific jurisdictional priorities, and developing plans for building and sustaining those capabilities.

**15 PHEP Capabilities**

<table>
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<th>Capability Name</th>
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<td>14. Responder Safety and Health</td>
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<td>15. Volunteer Management</td>
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In 2011 PHEP Funding Supports these local health activities:

- Hazard Vulnerability Analysis
- Planning (all-hazards, COOP, EDS);
- Testing and updating 24/7 contact lists;
- EDS planning and CDC-required metrics for testing EDS operational capabilities;
- NIMS and ICS trainings for appropriate personnel;
- Continuing development of mutual aid agreements;
- Updating multi-year exercise plans; and
- Support to individuals requiring additional assistance.

Other Emergency Preparedness Functions coordinated by EPB

- The **Hospital Preparedness Program** is tasked with building medical surge capability through planning, personnel, equipment, training and exercise capabilities at the state, regional, and local levels.

How are Emergencies handled in MA?

- **2008 Ice Storm**
  
  The Emergency Shelter in Fitchburg remained open for 2 weeks after the storm

- **H1N1**
  
  Worcester — The first public H1N1 Clinic in MA on 11/4/09
How are Emergencies handled in MA?

March 2010 Floods

Columbia St. in Fall River collapsed during the flood

May 2010 MWRA Water Emergency

A catastrophic water main break led to a boil water order impacting 30 Greater Boston communities for up to 3 days

How are Emergencies handled in MA?

Western MA Tornadoes, June 1, 2011

How are emergencies handled in MA?

The Massachusetts Emergency Management Agency (MEMA) coordinates federal, state, local, and private resources throughout the Commonwealth during times of disaster and other types of emergencies.

How are emergencies handled in MA?

With headquarters in Framingham and four regional offices, MEMA:

- Helps develop response plans for all types of hazards
- Trains emergency personnel
- Provides technical assistance
- Assists in responding to and recovering from emergencies

When fully activated, the SEOC is staffed according to 18 Emergency Support Functions (ESF).

The federal, state, local, volunteer, public and private organizations that comprise the ESFs are part of the Massachusetts Emergency Management Team (MEMT).
EMERGENCY SUPPORT FUNCTIONS (ESF) LIST

- 1 Transportation & Infrastructure
- 2 Communication
- 3 Public Works & Engineering Response
- 4 Fire Service
- 5 Emergency Management
- 6 Mass Care, Housing & Human Services
- 7 Resource Support
- 8 Health & Medical Services
- 9 Urban Search & Rescue
- 10 Oil & Hazardous Materials
- 11 Agriculture, Natural Resources
- 12 Energy
- 13 Public Safety & Security
- 14 Recovery & Mitigation
- 15 External Affairs

How are emergencies handled in MA?

The Massachusetts Department of Public Health (MDPH) is responsible for maintaining the ESF 8 Health and Medical Services Plan and staffing the ESF 8 desk at the SEOC.

ESF 8 staff are responsible for working with partner agencies and others to coordinate the provision of field services.

Communication with MDPH

- MDPH Duty Officer pager: 617-647-0343
- Epi on-call: 617-983-6800
- Your Regional Coordinator
- Health and Homeland Alert Network (HHAN)

How are emergencies handled locally in MA?

- Comprehensive Emergency Management Plan (CEMP)
- Local emergency planning committee (LEPC)
- MRC units

Contact Information

Michael Coughlin, MS
Local Public Health Manager
MDPH EPB
617-624-5091
Michael.coughlin@state.ma.us

Questions?