

# Chemical Stockpile Emergency Preparedness Program

Program Guidance

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Homeland  
Security

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# FEMA

**Federal Emergency Management Agency**



**Department of the Army**

## **Chemical Stockpile Emergency Preparedness Program**

This Program Guidance reflects a coordinated, joint effort between the Department of the Army and the Department of Homeland Security, Federal Emergency Management Agency (DHS/FEMA) to develop guidance and implement policy for executing the Chemical Stockpile Emergency Preparedness Program (CSEPP) at the Federal, State, and local levels.

This document updates and consolidates the CSEPP Programmatic Guidance and CSEPP Planning Guidance documents issued in June 2008. The Department of the Army Joint Program Executive Office for Chemical and Biological Defense and the Technological Hazards Division of DHS/FEMA have reviewed and agreed upon the concepts, guidance, and policies promulgated in this document.

We encourage the CSEPP community to continue to improve the Program Guidance by recommending changes. Changes to CSEPP guidance will be added through change sheets and/or future updates.

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# Preface

This document updates and consolidates the guidance provided in the *Chemical Stockpile Emergency Preparedness Program (CSEPP) Planning Guidance (2008)* and *CSEPP Programmatic Guidance (2008)* and supersedes these documents. This guidance has also been reorganized into a structure consistent with the CSEPP National Benchmarks.

This document provides the basis for Federal, State, and local program managers to implement CSEPP in keeping with the Department of the Army (Army)/Federal Emergency Management Agency (FEMA) CSEPP Strategic Plan. References have been made throughout this document to the following function-specific guidance documents that serve as its technical companions:

- Annual CSEPP Cooperative Agreement Guidance
- CSEPP Exercise Policy and Guidance (December 2012), (aka *The Blue Book*)
- CSEPP Medical Resource Guide
- CSEPP Public Affairs Compendium Workbook

This document will be reviewed every two years.

Chapter 1 provides an overview of the statutory and programmatic history of CSEPP, the organizational roles and responsibilities, and the management structure.

Chapter 2 provides a summary of the hazards and risks associated with the U.S. Army chemical weapons stockpile.

Chapters 3-14 provide guidance on each of the twelve CSEPP National Benchmarks. They are intended to provide a description of the critical components of each benchmark to assist program managers at the Federal, State, and local level in assigning responsibilities and developing budgets.

Appendices A and B provide a summary of the specific hazard and risk associated with the stockpiles at Blue Grass (Kentucky) and Pueblo (Colorado).

Appendix C provides a glossary of the terminology that may be unfamiliar and a list of acronyms.

Appendix D explains how the Policy Papers that originally guided the program have been incorporated into CSEPP Guidance.

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# Chapter 1: Background

## History

### CSEPP Origins

In 1985, Congress (see *DOD Authorization Act, 1986*, Public Law 99-145) directed the Department of Defense (DOD) to dispose of its lethal unitary (pre-mixed) chemical agents and munitions while providing “maximum protection for the environment, the general public, and the personnel involved.” To comply with this requirement, the U.S. Army decided to expand an existing program that was already addressing disposal of the M55 rocket stockpile. Oak Ridge National Laboratory (ORNL) was retained to prepare the necessary documentation under the National Environmental Policy Act (NEPA). A series of public meetings was held in the spring and summer of 1986 to gather public input on the Draft Programmatic Environmental Impact Statement (DPEIS). Hearings were also held in each of the eight affected communities. The DPEIS contained detail on risks of stockpile storage and disposal, including the potential consequences of an accidental release. Extensive public input was received regarding the need for enhanced emergency preparedness around the stockpile sites.

In 1987, the Army released a Draft Emergency Response Concept Plan (ERCP), which presented a basis for the development of local emergency response programs and examined various methods of emergency planning. The Army also prepared a Chemical Stockpile Disposal Implementation Plan and requested funds to implement enhanced emergency preparedness on-post and off-post for all chemical stockpile sites. FEMA joined the Army in implementing CSEPP through a Memorandum of Understanding (MOU) signed in August 1988. This MOU was reaffirmed in 1993 and revised in 1997 and 2004. (*Memorandum of Understanding between the Department of the Army and the Federal Emergency Management Agency*, Department of Homeland Security: Chemical Stockpile Emergency Preparedness Program, March 23, 2004.)

## Evolution of CSEPP

The history of CSEPP to date can be divided into four phases: initial development, program development, program maturation, and sustainment/closeout. A more detailed history of the program may be found in *History of the Chemical Stockpile Emergency Preparedness Program, Interim Report 2012, Volume I: Summary of Program* (May 2012).

### Initial Development (late 1986 through early 1990s)

The ERCP was initially developed by a team of contractors with assistance from the Army, ORNL, and FEMA. ERCP development began in November 1986, and a draft was presented to the Under Secretary of the Army in September 1987. In attendance at that meeting were numerous FEMA officials, including the Director of FEMA. The FEMA Director proposed that the U.S. Army and FEMA join forces to implement the concepts discussed in the ERCP. This meeting initiated the process that led to the 1988 MOU between FEMA and the Army. The final generic ERCP was included in the final programmatic environmental impact statement (FPEIS) when it was published by the Army in 1988 (*Chemical Stockpile Disposal Program Final Programmatic Environmental Impact Statement*).

Between 1986 and 1992, ORNL developed a series of technical studies for the Army that addressed many of the concepts outlined in the ERCP including topics such as protective action options and effectiveness, emergency responder protection, rapid accident assessment and protective action decision making, and warning system effectiveness. [See *Evaluating Protective Actions for Chemical Agent Emergencies*, ORNL-6615; *Communication of Emergency Public Warnings*, ORNL-6609; *Assessment of the Need for Dual Indoor/Outdoor Warning Systems and Enhanced Tone Alert Technologies in the Chemical Stockpile Emergency Preparedness Program*, ORNL/TM-12095.]

Following execution of the 1988 Army/FEMA MOU, ORNL developed a series of draft technical standards for critical program areas. These draft standards were presented for review by the Joint Army/FEMA Steering Committee, and were combined and released as “interim draft” program guidance for the CSEPP in 1991. Also during this period, Argonne National Laboratory developed site-specific ERCPs for each of the eight participating communities, applying the ERCP concepts to the unique nature of each community and each installation’s chemical stockpile. In 1991, the Army published Pamphlet 50-6 (rescinded in October 2012), which established guidance for installation commanders in response to chemical warfare agent emergencies. The first CSEPP Policy Paper defined the Congressional “maximum protection” mandate as “avoidance of fatalities to the maximum extent practicable” and was also published jointly by FEMA and the Army in 1991.

### **Program Formalization (early 1990s to 2000)**

During this time, management structures at FEMA and the Army went through a series of changes: the program became more formalized; State, tribal, and local CSEPP organizations were established, and program fundamentals such as annual exercises were established.

One of the hallmarks of this phase was an evolving management structure at both FEMA and the Army. The early Steering Committee structure with multiple functional subcommittees proved to be unwieldy because of its size, and program policy became more centralized between FEMA and Army management. There were many differences of opinion between the Federal partners during this period. In response, the involved states became better organized and began meeting as a bloc to discuss program issues and to advocate for their positions with the Army and FEMA management.

Also during this period, a series of U.S. Government Accountability Office (GAO) reports were issued that were critical of program management systems and the limited results that had been accomplished to date. These reports resulted in a restructuring of the program in 1997 to address the GAO recommendations, and to confirm FEMA as the lead agency for off-post preparedness in Section 141 of Public Law: 105-261. One of the more significant outcomes of this restructuring was the commitment to use both national and community Integrated Process Teams (IPTs) to manage the program and resolve fundamental issues.

During this period, heavy emphasis was also placed on developing emergency plans; designing and delivering training; hiring dedicated State and local staff; building infrastructure, including automation systems, warning systems, communication systems, and emergency operations centers (EOCs); and purchasing personal protective equipment (PPE).

### **Program Maturation (2000-2005)**

From 2000 until 2005, CSEPP was in a “program maturation” phase. New management at both the Army and FEMA CSEPP offices produced a more team-oriented approach, and the relationship between the Federal partners became much more cordial. The new program management initiated a “re-baselining” of CSEPP in early 2000, which included development of a new standardized CSEPP State-specific life cycle cost estimate (LCCE) process where CSEPP State agencies and counties took their annual cooperative agreement-detailed line item budget requests and expanded them into multi-year LCCEs. Also in 2000, a CSEPP Planning Conference was held that established a prioritized list of unresolved program issues and established a series of working groups to address each priority issue. These working groups ultimately evolved into functional, national-level IPTs and developed landmark innovations, including the CSEPP Portal, automated shelter-in-place (SIP) decision tools, reentry and recovery guidance, risk communication programs, and other planning tools and performance measures. During this period, FEMA also initiated development of an enhanced grants management software tool that

ultimately evolved into a central web-based financial management tool used by FEMA and the off-post communities to manage budgets, track grant expenditures, and report performance.

The terror attacks of September 11, 2001 placed additional emphasis on the vulnerability of the U.S. chemical warfare agent stockpile and led to renewed efforts to speed up the disposal process. As a result, plans to neutralize the bulk stockpiles at Aberdeen Proving Ground (APG), Maryland, and Newport Chemical Depot (NECD), Indiana, were expedited. During this period, several of the “baseline” incineration sites received their operating permits and began disposal operations.

### **Sustainment and Closeout (2005-present)**

Since 2005, the program has been in a phase of sustainment of capabilities and closeout of sites. Development of major new initiatives and infrastructure investments gave way to a focus on planning for a smooth program closeout while maintaining a high level of public safety and replacing obsolete systems as required. The Aberdeen, Newport, Pine Bluff, Umatilla, Anniston, and Deseret stockpiles have been eliminated and the CSEPP operations for those communities have been closed out. Construction of the Blue Grass and Pueblo disposal facilities is underway and disposal operations at both facilities will begin once testing has been completed. Program planning efforts have been focused on redefining what a two-site CSEPP should look like, and adjusting the Federal management structure so as to maintain efficiency while ensuring that the maximum-protection mandate remains fulfilled.

Congress has set parameters for ending CSEPP as demilitarization is completed at each site. In 2008, the National Defense Authorization Act amended 50 U.S.C. 1521(c)(5) to state that “assistance may be provided to State and local governments in developing capabilities to respond to emergencies involving the storage and destruction of lethal chemical agents and munitions until the earlier of the following:

1. The date of the completion of all grants and cooperative agreements (CAs) with respect to the installation or facility for purposes of this paragraph between the Federal Emergency Management Agency and the State and local governments concerned.
2. The date that is 180 days after the date of the completion of the destruction of lethal chemical agents and munitions at the installation or facility.”

CSEPP funding will continue until the Army has completed the destruction of each installation’s stockpile of lethal chemical agents and munitions. Until expiration of the statutory limit, the Army and FEMA will continue to request and expend appropriated funds to assist emergency preparedness and response to a chemical accident or incident (CAI). The most important objective for these funds remains to develop and maintain the capabilities required to avoid injuries and fatalities should an accidental release of a chemical agent occur. Further details on the closeout process are provided in the *CSEPP Closeout Guidebook* (August 2010).

## Organization

CSEPP involves the participation and cooperation of multiple agencies. The principal organizations and levels of government are the Army, FEMA, and State and local governments. The roles of each are described below.

### U.S. Army JPEO-CBD

The Joint Program Executive Office - Chemical and Biological Defense (JPEO-CBD) is responsible for the Army's portion of the Chemical Demilitarization Program, including chemical stockpile emergency preparedness efforts. The JPEO-CBD is part of the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology and that it is responsible for U.S. Army Materiel Command (AMC) and U.S. Army Chemical Materials Activity (CMA).

### U.S. Army – HQ level

The Army CSEPP Office resides within the CMA, a separate reporting activity of the AMC. Safe storage of the Army's stockpile of lethal chemical weapons is a principal mission of CMA. The CSEPP Office reports to the CMA Director of Stockpile Operations.

The CMA CSEPP mission includes:

- Providing support and oversight of chemical emergency preparedness at the chemical installations and in nearby communities. This is accomplished by providing direct technical support from CMA CSEPP staff; contractor support; and funding for CSEPP-specific personnel, equipment, and operating expenses.
- Providing oversight of CSEPP training and exercises on the Army side. This includes training Army CSEPP personnel, co-directing CSEPP exercises, and evaluating Army performance at CSEPP exercises.
- Coordinating with FEMA on all aspects of the program, including funding requests and provision of funds for community preparedness, program policy, exercise programs, and meetings and workshops.

### U.S. Army – Installation Level

The remaining chemical stockpile installations in the U.S. are the Pueblo Chemical Depot (PCD) and the Blue Grass Chemical Activity (BGCA). At Pueblo, chemical weapon storage and disposal is the facility's main mission. At Blue Grass, the Chemical Activity is a tenant activity on the Blue Grass Army Depot (BGAD), a larger facility with multiple operations relating to ammunition and protective equipment. BGAD is part of the Joint Munitions Command (JMC), a major subordinate command of AMC.

The Army maintains emergency response resources on its installations. In a chemical emergency at an Army installation, these resources would be the primary ones to provide damage assessment, rescue, firefighting, and containment of hazardous materials. Specially trained and equipped Army crews are maintained for this purpose. Local off-post police, fire, and emergency medical service (EMS) personnel would not be requested to respond to the chemical limited area.

PCD and BGCA each maintain an Emergency Operations Center (EOC) and a cadre of trained CSEPP staff. The installations are full participants in CSEPP exercises, agreements, automation systems, and IPTs. They also maintain meteorological equipment and computer systems to model the dispersion of any chemical release and provide recommended protective actions.

### Chemical Agent Demilitarization Facilities

At both Pueblo and Blue Grass, the chemical demilitarization (demil) facilities are administered by a separate Army organization, the Assembled Chemical Weapons Alternatives (ACWA) program. The ACWA Program Office is officially referred to as the U.S. Army element, ACWA, which is a separate Reporting Activity under the U.S. Army Materiel Command. The Program Manager reports directly to the Deputy Assistant Secretary of Defense (Threat Reduction and Arms Control).

The ACWA demil facilities are the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) and the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP). Demil facility construction and operations are being carried out by contractors. The system contractor for BGCAPP is Bechtel Parsons Blue Grass Team – for PCAPP it is the Bechtel Pueblo Team. Further information about ACWA and the demil facilities is available from the program website, <https://www.pmacwa.army.mil/index.html>.

### FEMA

In FEMA, CSEPP resides within the Technological Hazards Division (THD) of the National Preparedness Directorate. This Division consists of two main programs: CSEPP and the Radiological Emergency Preparedness Program for communities near nuclear power plants.

FEMA takes the lead in assisting, promoting, and evaluating preparedness in the off-post CSEPP communities. FEMA's role is executed through a national office within THD and through personnel in the Regional offices where the chemical installations are located. Pueblo is in FEMA Region VIII (based in Denver) and Blue Grass is in Region IV (based in Atlanta).

FEMA's CSEPP mission includes:

- Providing support and oversight for chemical emergency preparedness on the part of State and local governments in CSEPP communities. This mission is accomplished through direct technical support provided by FEMA CSEPP staff; contractor support; and funding for CSEPP-specific personnel, equipment, and operating expenses.
- Administering grant funding to State governments for CSEPP. Funds are transferred from the Army to FEMA for pass-through to off-post CSEPP communities; FEMA manages the process by which off-post communities apply for and receive funding, and monitors progress of funded activities.
- Developing and implementing appropriate training for off-post responders.
- Co-directing and evaluating CSEPP exercises on the off-post side.
- Coordinating with the Army on all aspects of the program, including budgeting and funding, program policy, execution of the exercise program, and meetings and workshops.

## Army/FEMA Coordination

The respective program roles of the Army and FEMA are defined through an interagency MOU. The MOU was first signed in 1988 and was updated in 1993, 1997, and 2004. The current MOU describes the agency roles (similarly to the descriptions above) and also defines the following areas of cooperation to which both agencies are committed:

1. Jointly developing a readiness posture at the stockpile storage installations and in the surrounding communities on the basis of assessments, validated requirements, and available resources at the earliest practicable date.
2. Assuring the continuance and success of a collaborative approach to decision making and problem solving by supporting Integrated Product and Process Teams, in accordance with the provisions of Public Law: 104-201.
3. Assuring the integration and compatibility of on-post and off-post emergency preparedness and response procedures, to include information and communication systems.
4. Assessing and improving the effectiveness of Federal, State, and local response systems and procedures through the design, conduct, and evaluation of exercises.
5. Keeping the public involved and informed through public information and education programs, including JICs/systems activities and an active community relations program.

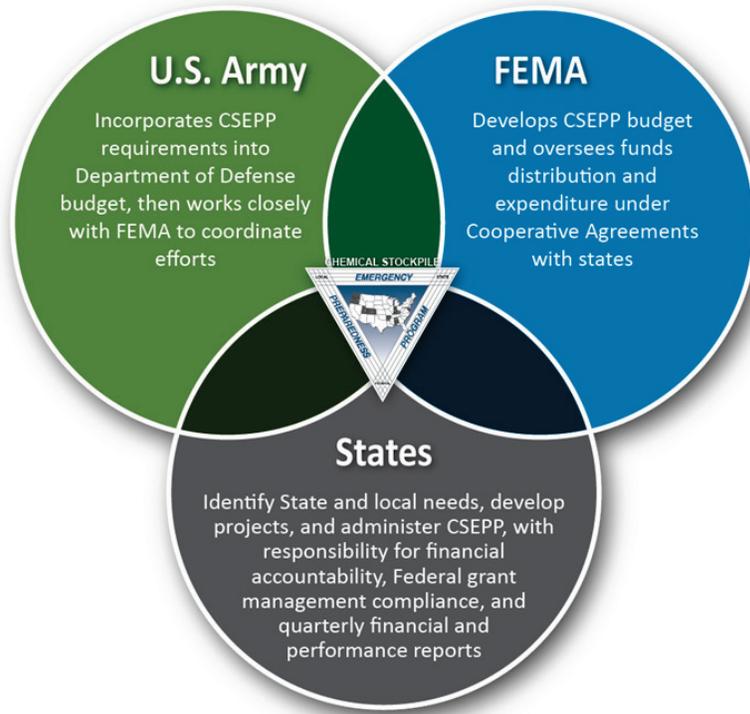
6. Providing reciprocal technical support for joint initiatives, as well as initiatives requested by installations and State and local governments.
7. Collaborating in the preparation of Army and FEMA CSEPP budgets to be presented and defended before the Congress each year. This effort will facilitate maintenance of a joint LCCE for CSEPP, which includes on-post and off-post emergency preparedness program funding requirements, as well as technical support funding requirements.
8. Using site-specific risk analyses in conjunction with defining readiness and funding requirements for site-specific chemical materiel emergency preparedness programs.

The MOU is implemented through the *Army-FEMA Strategic Plan*, which is discussed in the Management Structure section below.

## State and Local Governments

CSEPP is built on the fundamental principle that State and local governments are in the best position to understand their communities and to provide first response to natural and human-caused emergencies. When such events occur, local agencies such as county or municipal law enforcement, fire, EMS, HazMat teams, and public works are generally the first to respond, as they are literally closest to the problem. If local resources are overwhelmed, the town or county may request assistance from neighboring local jurisdictions or from the State. The State maintains a variety of emergency response resources such as an emergency management agency, law enforcement (State police), and public health. The State also typically has some specialized resources that may not exist at the local level, such as environmental sampling and analysis capability. In addition, the Governor may activate local National Guard units to assist with response.

In an emergency involving the chemical stockpile, local authorities would have primary responsibility for taking immediate measures to protect the nearby off-post population, including public warning, protective action instructions, blocking entry to the potential hazard area, managing evacuation, and providing initial reception and shelter for evacuees. The State's role would be to assist with personnel, equipment, and resources to support local functions; provide emergency powers and authorities through an emergency declaration; request a presidential declaration under the Stafford Act; and provide other State resources for managing long-term protective actions and recovery processes, if needed.



**Figure 1: CSEPP program management employs a common budgeting, cost accounting, and performance management system to integrate the activities of the Army, FEMA, and State and local agencies**

Preparedness funds are provided to each community through CSEPP CAs, based on a negotiated annual work plan between the States and the FEMA regional offices. Under the CAs, each State identifies its needs, develops proposed projects to meet those needs, requests funds from FEMA, and disburses these funds to the various State offices and local governments involved in the proposed projects. The States are responsible for financial accountability, adherence to Federal grant management rules, and providing quarterly financial reports and narrative performance reports addressing the capability improvement realized through the funds. Local jurisdictions (counties) are sub-grantees under the State as grantee. State and county governments currently participating in CSEPP are listed in Table 1 and illustrated in the community maps provided in Appendix A and B.

**Table 1: CSEPP State and Local Jurisdictions**

<b>Site</b>	<b>Associated Jurisdictions</b>
Blue Grass	Commonwealth of Kentucky Clark, Madison, Estill, Garrard, Powell, Rockcastle, Fayette, Jackson, Jessamine, and Laurel Counties.
Pueblo	State of Colorado Pueblo County

## Management Structure

### Strategic Plan and Benchmarks

CSEPP operates under a Strategic Plan (available on the CSEPP Portal) that reflects a coordinated, joint effort between the Army’s CMA and FEMA’s THD to develop and implement a customer-centered planning process for the program. The Strategic Plan is the basic framework for execution of CSEPP at the State, local, and installation level. It includes a comprehensive mission and vision statement; a general description of goals and objectives and how these will be achieved; a description of performance measures (indicators) used; and identification of key factors that could affect achievement of the general goals and objectives.

The Strategic Plan defines 12 program benchmarks:

- Administration
- Personnel
- Coordinated Plans
- Medical Preparedness
- Training
- Exercises
- Communications
- Automation
- Alert and Notification
- Emergency Operations Center
- Public Outreach and Education
- Protective Actions

The benchmarks are used to assess the status of CSEPP capabilities at and around each of the chemical stockpile sites. The goal of the program is to achieve full capability for each benchmark and to sustain this capability throughout the disposal of all chemical agents and materials at each site. Assessment of benchmark capabilities is governed by the principle of “functional equivalency,” meaning that it is not necessary to have identical resources in every jurisdiction as long as the overall emergency management capabilities meet the program benchmarks. Each of these benchmarks is described in more detail later in this document (see Chapters 3-14).

In addition to the CSEPP Strategic Plan, the benchmark system is reflected in the programmatic LCCE, annual budgets, quarterly performance reports from grantees, and employee work plans. The CSEPP CAs are managed using these benchmarks (refer to the Administration chapter below and the CSEPP Cooperative Agreement Guidance on the CSEPP Portal for more information).

### Collaboration and Coordination

The Army and FEMA work together to jointly develop a readiness posture at the stockpile storage installations and in the surrounding communities based on assessments, validated requirements, and available resources. The two agencies use site-specific risk analyses to provide

the basis for defining readiness and funding requirements for site-specific emergency preparedness programs. Both provide technical support for joint initiatives as well as initiatives requested by installations and State and local governments. They collaborate in the preparation of a joint LCCE for CSEPP, which includes on-post and off-post emergency preparedness program funding requirements as well as technical support funding requirements. The LCCE facilitates preparation of Army and FEMA CSEPP budget submissions to be presented and defended before Congress each year.

Army and FEMA management have established three basic structures for coordinating activities across the program:

- Community IPTs for the Blue Grass/Kentucky and Pueblo/Colorado sites;
- Functional/Working IPTs and workgroups as necessary; and
- A Program Management Team (PMT)

### **Integrated Process Teams (IPTs)**

To help carry out its mission, CSEPP uses IPTs, mandated under Public Law: 104-201 (*National Defense Authorization Act for FY 1997*) and implemented under an Army/FEMA Joint Memorandum for the Record Use of Integrated Process Teams (IPTs) (May 1998). IPTs allow Army, FEMA, Federal, State, and local CSEPP personnel to collaboratively address integration and compatibility of on-post and off-post emergency preparedness and response procedures. The teams serve as a management tool for programmatic planning and issue discussion and enable stakeholders to share knowledge across the program. IPTs bring together stakeholders, staff, and other experts to design and implement new processes and create new products to improve program operations.

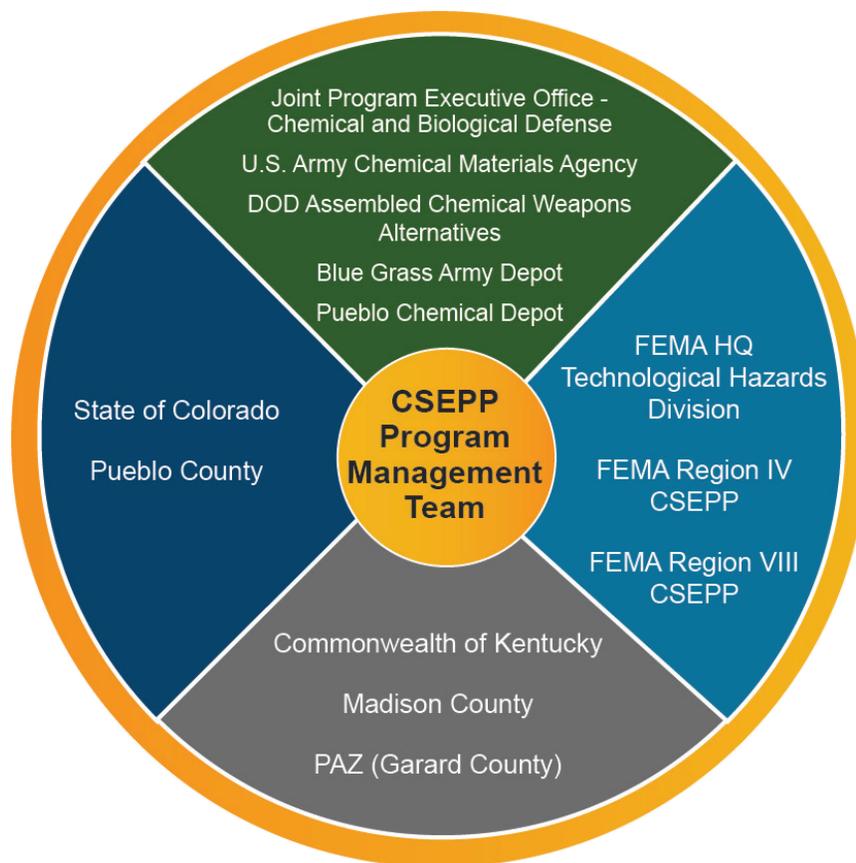
The Community IPTs in Colorado and Kentucky form the heart of the program and reflect the bottom-up philosophy of CSEPP. They consist of representatives from the State, immediate response zone (IRZ) and protective action zone (PAZ) counties, chemical installation (depot), FEMA Region, Army and FEMA HQ, and other organizations within the “whole community.” They can establish their own sub-IPTs and working groups to address specific issues of concern.

Functional/Working IPTs exist at the discretion of the national program managers to address crosscutting issues for the functional areas of the program. In the past, functional IPTs have been established to address various topics (e.g., Finance, Monitoring, Protective Actions, Closeout), and were disbanded when those issues were adequately addressed. The program currently supports functional IPTs for Automation and Public Affairs, as well as working groups for exercises and medical issues. Each IPT develops its own charter and annual work plan (subject to the approval of the Program Management Team) that establishes its mission, membership, voting, and other factors including an exit strategy. Less formal coordinating workgroups and teams have also been established on an as-needed basis.

*CSEPP's Teams: Best Practices and Lessons Learned* (2004, available on the CSEPP Portal) discusses the best practices and lessons learned that are available for use by all CSEPP IPTs. Tailored, short-term training and technical assistance are also available upon request to all IPTs through the Army chain of command.

### Program Management Team (PMT)

The PMT was established in 2011 as part of the transition to a two-state program. It supersedes the former State Directors/Program Managers group, and includes additional membership to enable better coordination within the reduced scope of the program. (See *Memorandum to CSEPP IPT Co-Chairs* [May 2011] on the CSEPP Portal.) The PMT meets twice a year and consists of representatives from the organizations shown in the figure below.



**Figure 2: Program Management Team**

Representatives from other members of the program partnership are welcome to attend PMT meetings.

In addition to the day-to-day and week-to-week coordination activities at the sites, CSEPP partners conduct regular coordination meetings throughout the year, including meetings and

conference calls for the Community IPTs, Functional/Working IPTs and sub-IPTs, and the Program Management Team. A comprehensive schedule is maintained on the CSEPP Portal.

Representatives from partner organizations are strongly encouraged to participate in these activities; travel funding can be provided through the annual budget. Given the nature of emergency management and increased travel restrictions at all levels, meeting hosts should also ensure that means are in place to enable remote participation, including teleconferencing, webinars, web meetings, and video teleconferencing, if necessary. If they are not readily available, FEMA can provide access to such services upon request.

## Requests for Federal Technical Support

The Army and FEMA have developed protocols for the provision of technical support and information in response to requests from off-site CSEPP communities. This includes requests for both medical and non-medical technical information. Requests for technical information can be grouped into three types:

- Requests that require a simple response to a technical question
- Initiation of technical assistance/support that has been previously approved, and can be accomplished within the ability of existing CSEPP funds
- Initiation of technical assistance/support that has not been previously approved, and/or falls outside of the current CSEPP budget

For simple technical information requests received from local or State governments or from CSEPP sections of FEMA regional offices, CMA is the approval authority with FEMA HQ receiving notification of the request. CMA is the approval authority for simple technical information requests from FEMA HQ, the Army, or the military installations. No notification of other agencies required.

For requests for approved/funded CMA technical support received from local or State governments, the CSEPP sections of FEMA regional offices are the approving body, with FEMA HQ receiving notification of the request. For similar requests received from FEMA HQ, DASA (ECW), or military installations, CMA will execute the requests as funded and inform both FEMA and DASA staff of the results.

For requests for unapproved/unfunded CMA technical support received from local or State governments, or from CSEPP sections of FEMA regional offices, both FEMA HQ and DASA (ECW) will approve the request prior to CMA executing the task. For similar requests from military installations, CMA, FEMA HQ, or DASA (ECW), both FEMA HQ and DASA (ECW) must approve the request prior to CMA executing the task.

## CSEPP National Benchmarks and Organization of this Guidance

The following twelve chapters provide guidance on each of the CSEPP National Benchmarks listed below. Each chapter provides an overview of the benchmark derived from the CSEPP Strategic Plan and three elements in addition to the more specific guidance:

- A chart illustrating the connection between each benchmark and the following two classification systems for emergency management activities:
  - The Emergency Support Functions (ESFs) established by Department of Homeland Security (DHS)/FEMA under the National Response Framework (NRF) (<http://www.fema.gov/national-response-framework>);
  - The Core Capabilities established by FEMA under Presidential Policy Directive 8 (<http://www.fema.gov/ppd8>);
- A ‘Guidance’ box listing the key Federal guidance resources associated with the Benchmark (including CSEPP) and links to where items can be accessed online; and
- A ‘Training’ box listing the key training resources associated with the benchmark (including CSEPP) and links to where items can be accessed online.

These chapters are intended to provide a description of the critical components of each benchmark to assist program managers at the Federal, State, and local level in assigning responsibilities and developing budgets. For detailed guidance on day-to-day activities intended for functional specialists, refer to the Federal guidance listed in each chapter.

The benchmark chapters have been organized to group related program activities in the following order:

- **Administration:** Administrative support for each installation, State, and IRZ and PAZ county.
- **Personnel:** Personnel, such as CSEPP coordinators, public information/public affairs officers, planners, and ADP specialists, to support CSEPP activities on the installation and in the state and IRZ counties.
- **Coordinated Plans:** Coordinated plans conforming to established CSEPP guidance for each installation, State, and IRZ and PAZ county.
- **Medical Preparedness:** A medical program for off-post medical preparation and response to a CSEPP incident/accident.
- **Training:** Training programs consistent with the FEMA State Training Plan (for off-post jurisdictions) and Army certification requirements (for on-post installations), and maintained proficiency of emergency services providers/responders and CSEPP staff, as defined and measured by CSEPP guidance.

- **Exercises:** An exercise program that is consistent with the Exercise IPT approved exercise policy.
- **Communications:** Functioning communications system for IRZ counties and installations, as well as between EOCs, military installations, JICs, and states.  
**Automation:** Functioning automated data processing (ADP) system connecting critical installation facilities, on-post EOC, off-post EOC, Joint Information Center (JIC), and State EOC.
- **Alert and Notification:** Functioning alert and notification system for installation, IRZ, and transition zone.
- **Emergency Operations Center:** Functioning EOCs for each installation and IRZ county.
- **Public Outreach and Education:** A public outreach/education program for public information and education.
- **Protective Actions:** Protective action strategy conforming to established CSEPP guidance for each jurisdiction.

The benchmarks are used to assess and report the status of CSEPP efforts at and around the Army's chemical stockpile sites within the United States. The goal is to achieve full compliance within each benchmark and to sustain this capability throughout the disposal of all chemical agents and materials at each site. CSEPP Program Managers should track the obligation of their CSEPP resources by these national benchmarks to facilitate this reporting. The composition and scope of each benchmark is governed by the principle of "functional equivalency;" it is not necessary to provide identical resources to each jurisdiction as long as their emergency management capabilities meet the CSEPP Benchmarks.

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## Chapter 2: Technical Background

Effective emergency response planning under CSEPP requires an adequate technical understanding of the chemical agents and materials involved and the way they are stockpiled. This chapter describes aspects of the chemical agents and stockpiles pertinent to emergency planning. The stockpile is described in terms of the amount of agent stored at each location, the various munitions and containers in which the agents are stored, and the general physical characteristics of the storage areas. This section also addresses related technical systems, including automated data processing systems, meteorological instrumentation, and assistance available from CMA.

### Properties of Chemical Agents

The agents of primary concern in this guidance are the nerve agents GB and VX and the blister agents H, HT, and HD. Both nerve and blister agents are in the stockpile at the Blue Grass Chemical Activity, whereas the Pueblo Chemical Depot stores only blister agents. The chemical and physical properties of these agents have a direct bearing on emergency planning and response. The chemical and physical properties determine the agents' volatility, behavior in explosions and fires, and persistence in the environment. Agent toxicity determines the impact on human, animal, or plant life. All community and installation EOCs should maintain copies of the Material Safety Data Sheets (MSDS) on these agents (copies are available on the CSEPP Portal).

#### Physical and Chemical Properties

All of the agents are liquids at normal indoor temperatures, although most sulfur mustards (H and HD) freeze at ambient temperatures below 13 to 15°C (55 to 59°F). The sulfur mustard agent blend, HT, freezes at ambient temperatures below 0 to 1.3°C (32 to 34.3°F). The mustard agents have relatively high boiling points from 215 to 217°C (419 to 423°F) for agents H and HD, and greater than 228°C (442°F) for agent HT. The mustard agents have significant vapor pressures only at ambient temperatures above their freezing points; therefore, they generally will only pose an inhalation hazard at those higher ambient temperatures.

In pure form, the nerve agents (GB and VX) are usually odorless, colorless (agent VX may be pale amber), and tasteless. GB is a non-persistent nerve agent that primarily presents a vapor hazard since it can be carried downwind quickly. Under most release and meteorological conditions, GB produces the greatest downwind hazard distance when compared to other agents in the stockpile. Thermal decomposition of GB begins at approximately 130°C (266°F), and it completely decomposes in 2.5 hours at 150°C (302°F).

Nerve agent VX is a persistent agent that presents both a vapor and a percutaneous (skin absorption) threat. VX is not very volatile, so it presents much less vapor hazard than GB; however, it is 100 times more toxic by the percutaneous route. Therefore, if VX is aerosolized due to an explosive release, it presents a percutaneous downwind hazard. In practical terms, a toxic dose of VX is more likely to result from skin rather than respiratory exposure; however, all nerve agents are sufficiently volatile to pose an inhalation hazard. At concentrations of 30 mg/m<sup>3</sup> (milligrams per cubic meter) or greater, VX median lethal inhalation doses can be attained in a few minutes.

Persistence of chemical agents in the environment varies with the agent, the environmental medium, and other conditions such as pH and temperature. Blister agents (H, HD, and HT) and the nerve agent VX persist in soils and on vegetation, although the persistence varies. Nerve agent GB degrades within a relatively short period. Mustard agents can permeate ordinary rubber and may permeate other protective materials over time, but are not regarded as water contaminants due to their low solubility.

### Public Health and Environmental Impacts

Severe human health effects and environmental impacts could result from a chemical agent release. The magnitude of the impact would depend on a number of variables: the amount and type of agent released; the method of release (e.g., spill or explosion); meteorological conditions; the number of unprotected people potentially exposed to the agent(s); distance from the chemical event to the unprotected individuals; age, gender, and health of exposed populations; route and duration of exposure; and timeliness of decontamination and medical treatment.

Agent effect dose-rate values are based on the assumption that the majority of the dose is absorbed by inhalation and that the individuals exposed are wearing clothing. In the case of VX, the lethality estimates for human exposure through the skin change dramatically as a function of the amount of clothing worn and the wind speed. Although the majority of the potentially exposed population would be expected to be clothed, many individuals would be expected to have portions of their bodies exposed. Thus adjustments to the toxicity levels should be made in some modeling applications for civilian populations. Certain members of the population may be more susceptible to agent exposure (e.g., infants, the elderly, and individuals debilitated by chronic disease).

In addition to the concern over human health effects, emergency response planning must consider impacts on drinking water sources, food supplies, and the environment. Additionally, environmental contamination might affect the time period required before evacuated personnel could begin to re-enter the affected area after termination of the immediate airborne health hazard.

Data on persistence of chemical agents indicate attention should be given to potential effects on food supplies, livestock, and croplands. It is very unlikely that such contamination would occur, but State and local emergency responders should be prepared to address the possibility as well as public perceptions of it. Contamination of public water supplies should be of concern only if a spill of liquid agent occurred directly into the water body. Groundwater supplies could be affected if there was a direct spill or leak into a well or spring. Such releases are extremely unlikely. Persistent chemical agent (e.g., sulfur mustard or nerve agent VX) contamination of land surfaces, while highly unlikely beyond installation boundaries, poses a threat of potential contamination to the surface of exposed food items (e.g., fruit or leafy vegetables) in areas where high-level plume deposition could occur. Toxic effects to grazing animals can be expected from ingestion of forage, or dermal contact with objects contaminated by the persistent chemical agents. Volatile GB is not considered a source of significant surface contamination.

## Chemical Stockpile Sites

Chemical warfare agent stockpiles were originally stored at eight continental United States (CONUS) Army military installations: Deseret Chemical Depot, Utah; Pine Bluff Arsenal, Arkansas; Umatilla Chemical Depot, Oregon; Pueblo Chemical Depot, Colorado; Anniston Army Depot, Alabama; Aberdeen Proving Ground, Maryland; Newport Chemical Depot, Indiana; and Blue Grass Army Depot, Kentucky (see Table 2). Only the Pueblo and Blue Grass facilities are still active stockpile storage sites.

The chemical agents were stored in three basic configurations:

- Projectiles, cartridges, mines, and rockets containing propellant and/or explosive components
- Aircraft-delivered munitions that do not contain explosive components
- Steel one-ton containers

Most of the stockpile was in the last form. The current stockpile at the Blue Grass and Pueblo sites contains projectiles, cartridges, and rockets. All of the agents are at least 40 years old; some are more than 50 years old.

Chemical agents and munitions are stored in a specific area within each installation, which is referred to as the “chemical limited area.” The stockpile is kept on pallets, in boxes, or in cans, and is stored in earth-covered bunkers (“igloos”) specifically designed to protect the munitions

from external forces (environmental factors and attack) and contain the force of an explosion. The igloos have lightning protection systems and steel doors and are equipped with multiple locking systems. Usually, only a single, agent-specific munition type is stored in an individual igloo (e.g., VX rockets in one igloo and GB rockets in a separate igloo). Access is strictly controlled by security forces, augmented with intrusion detection devices, barricades, and perimeter lighting.

**Table 2: Original Locations and Compositions of CONUS Chemical Stockpile Sites**

<b>Chemical Activity/Depot</b>	<b>Chemical Agents</b>	<b>Munition Configurations</b>	<b>Disposal Technology</b>	<b>Percentage of Original Stockpile</b>
Edgewood Chemical Activity, MD	HD	Ton containers	Neutralization	5.2
Anniston Chemical Activity, AL	HD, HT, GB, VX	Artillery cartridges Artillery projectiles Ton containers Rockets Mines	Incineration	7.2
Blue Grass Chemical Activity, KY	H, GB, VX	Artillery projectiles Rockets	Neutralization/ Supercritical Water Oxidation	1.7
Newport Chemical Depot, IN	VX	Ton containers	Neutralization	4.0
Pine Bluff Chemical Activity, AR	HD, HT, GB, VX	Ton containers Rockets Mines	Incineration	12.2
Pueblo Chemical Depot, CO	HD, HT	Artillery cartridges Artillery projectiles	Neutralization/ Biotreatment	8.3
Deseret Chemical Depot, UT	H, HD, HT, Lewisite, GA, GB, VX	Artillery cartridges Artillery projectiles Aerial bombs Ton containers Rockets Mines Spray tanks	Incineration	43.2
Umatilla Chemical Depot, OR	HD, GB, VX	Artillery projectiles Aerial bombs Ton containers Rockets Mines Spray tanks	Incineration	11.8

## Worker Safety Standards

Safety standards for workers who work with or may encounter chemical agents have been developed by the Army, the Centers for Disease Control and Prevention (CDC), and the Occupational Safety and Health Administration (OSHA).

The Army has responsibility to ensure that chemical agent operations are conducted in a safe, secure, and reliable manner under [AR 50-6](#). In the execution of these duties, the Army is committed to providing a safe and healthful environment for the general population and workers at the chemical stockpile sites.

The CDC has promulgated Airborne Exposure Limits (AELs) for workers for both nerve and blister agents. [Final recommendations for nerve agents, 68 Fed. Reg. 58348, 9 Oct. 2003, and interim recommendations for mustard agents, 69 Fed. Reg. 24164, 4 May 2004.] The nerve agent AELs became effective on January 1, 2005. The mustard AEL was effective as of July 1, 2005. [The Army adopted the AEL criteria recommended by the Centers for Disease Control and Prevention [CDC] guidance in the Fed. Reg., Volume 68, No. 180, 17 September 2003, for nerve agents GB and VX, and Fed. Reg., Volume 69, No. 85, 3 May 2004, for H, HD, and HT. *Hazardous Waste Operations and Emergency Response*, 29 CFR, Part 1910.120. Available online at [http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=standards&p\\_id=9765](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9765).] The AELs include three general safety standards (see Table 3).

**Table 3: Worker Airborne Exposure Limits**

Agent	IDLH	STEL	WPL
GB	0.1 mg/m <sup>3</sup>	0.0001 mg/m <sup>3</sup>	0.00003 mg/m <sup>3</sup>
VX	0.003 mg/m <sup>3</sup>	0.00001 mg/m <sup>3</sup>	0.000001 mg/m <sup>3</sup>
H, HD	0.7 mg/m <sup>3</sup>	0.003 mg/m <sup>3</sup>	0.0004 mg/m <sup>3</sup>

The first is Immediately Dangerous to Life or Health (IDLH), which is defined as “an atmospheric concentration of any toxic, corrosive, or asphyxiant substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual’s ability to escape from a dangerous atmosphere.” (*Hazardous Waste Operations and Emergency Response*, 29 CFR, Part 1910.120.) The purpose of establishing an IDLH is to “ensure that the worker can escape from a given contaminated environment in the event of failure of the respiratory protection equipment,” (*NIOSH Respirator Decision Logic*, 1987) allowing an individual to be exposed to such a concentration for up to 30 minutes without death, serious or irreversible health effects, or impairment/impediment to the ability to escape. The point of the IDLH level is that respiratory protection must be used at that level or higher, and that a rescue system must be in place in case of respiratory protection failure.

The Short-Term Exposure Limit (STEL), established by the U.S. Occupational Safety and Health Administration (OSHA) is the maximum concentration of a chemical to which workers may be exposed continuously for up to 15 minutes without danger to health or work efficiency and safety. The concentration is developed on a time-weighted average (TWA), which is the maximum concentration of agent to which employees may be exposed averaged over a specified length of time. Monitoring is conducted in those areas involving operations where workers may be exposed to levels of chemical agent escaping into the operating environment and exceeding the STEL.

Similarly, the Worker Population Limit (WPL) is the maximum allowable eight-hour concentration that an unprotected chemical worker could be exposed to for an eight-hour workday and 40-hour week for 30 years without adverse effect. [Implementation Guidance Policy for New Airborne Exposures Limits for GB, GA, GD, GF, VX, H, HD, and HT, Department of Army Safety Office, 18 June 2004.] Again, monitoring is performed for identified areas where workers may be exposed to chemical warfare agents. The worker safety standards developed for chemical agents are taken into account and used for monitoring both storage and chemical disposal facilities (CDFs).

CSEPP funds may be used by installations to procure personal protective equipment (PPE) and monitors to comply with worker safety requirements. However, off-post emergency responders should not plan to enter contaminated areas or potentially contaminated areas. Therefore, CSEPP communities should not procure PPE and monitors for the purposes of re-entering or monitoring potential hazard areas.

In addition to the worker population limits described above, the CDC has issued General Population Limits (GPLs) for chemical agent exposure. The GPL is the maximum concentration to which the general population may be exposed 24 hours a day, 7 days a week, for a 70-year lifetime (see Table 4). This applies to the entire general population, including all ages and medical conditions. These values are used in developing risk management efforts to ensure measures are developed to protect against chronic exposure of the general population to chemical warfare agents during day-to-day operations of the disposal facility.

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**Table 4: General Population Limits for Chemical Warfare Agents**

<b>Agent</b>	<b>General Population Limit, 24-hour TWA (12-hour period for mustard)</b>
GB	0.00000100 mg/m <sup>3</sup>
VX	0.00000060 mg/m <sup>3</sup>
H, HD, HT	0.00002000 mg/m <sup>3</sup>

*OSHA/NIOSH Interim Guidance* (February 2006)

Off-post emergency responders must abide by the hazardous waste operations and emergency response (HAZWOPER) regulation. The HAZWOPER regulation requires use of appropriate protective equipment and procedures for emergency workers responding to any hazardous material incident, including a CAI. Additional guidance on emergency worker protection is located in the [\*CSEPP Medical Resource Guide\*](#).

It should be made clear that there are different agent concentration standards for emergency planning as opposed to agent concentration standards for worker and public health protection and safety. Worker agent standards (with the exception of depot chemical workers) and the GPL are generally not used for emergency planning or response. Acute Exposure Guideline Levels (AEGLs), discussed in the following section, are specifically designed for the protection of the general public for emergency planning purposes.

## Acute Exposure Guideline Levels

In November 2001, the Army and FEMA adopted AEGLs as the toxicity criteria to be used by the CSEPP community for the purposes of emergency planning and response activities in the event of a chemical agent release. These AEGLs are not safety standards, but rather decision guidelines for the implementation of protective actions. The agent AEGLs have been reviewed and approved by the National Research Council and the CDC. AEGLs should not be confused with worker safety levels, GPL, or other regulatory standards. They are to be used in air dispersion models to establish potential areas at risk from CAIs.

The AEGLs include three threshold levels, from AEGL-1 to AEGL-3, associated with increasingly severe potential health effects. They are used in conjunction with plume-dispersion modeling to identify and prioritize areas for protective action. As such, CSEPP emergency responders should not plan to procure monitors and PPE for the purposes of monitoring AEGLs. In general, the AEGLs may be used to prioritize actions as follows:

- Priority should be given to prevent exposures above AEGL-3, which could result in severe, incapacitating, and possibly lethal outcomes.
- Protective actions should be directed toward preventing or minimizing exposures above AEGL-2, above which some temporary, but potentially escape-impairing effects could occur.
- AEGL-1 boundaries identify those areas where, at or below the expected concentration, no action is required to protect the public. This information may be used at the discretion of local emergency decision-makers to alert and notify communities.

AEGL thresholds have been set for nerve and blister agents in the U.S. chemical weapons stockpile (Table 5). CSEPP policy is to use AEGLs for protective action decision making.

Table 5: Chemical Agent AEGLs (concentrations in PPM [mg/m<sup>3</sup>])**Nerve Agent GB (Sarin)**

	10 min	30 min	60 min	4 hr	8 hr
AEGL-1	0.0012 [0.0069]	0.00068 [0.0040]	0.00048 [0.0028]	0.00024 [0.0014]	0.00017 [0.0010]
AEGL-2	0.015 [0.087]	0.0085 [0.050]	0.0060 [0.035]	0.0029 [0.017]	0.0022 [0.013]
AEGL-3	0.064 [0.38]	0.032 [0.19]	0.022 [0.13]	0.012 [0.070]	0.0087 [0.051]

**Nerve Agent VX**

	10 min	30 min	60 min	4 hr	8 hr
AEGL-1	0.000052 [0.00057]	0.000030 [0.00033]	0.000016 [0.00017]	0.0000091 [0.00010]	0.0000065 [0.000071]
AEGL-2	0.00065 [0.0072]	0.00038 [0.0042]	0.00027 [0.0029]	0.00014 [0.0015]	0.000095 [0.0010]
AEGL-3	0.0027 [0.029]	0.0014 [0.015]	0.00091 [0.010]	0.00048 [0.0052]	0.00035 [0.0038]

**Sulfur Mustard**

	10 min	30 min	60 min	4 hr	8 hr
AEGL-1	0.060 [0.40]	0.020 [0.13]	0.010 [0.067]	0.0030 [0.017]	0.0010 [0.0083]
AEGL-2	0.090 [0.60]	0.030 [0.20]	0.020 [0.10]	0.0040 [0.025]	0.0020 [0.013]
AEGL-3	0.59 [3.9]	0.41 [2.7]	0.32 [2.1]	0.080 [0.53]	0.040 [0.27]

Source: EPA AEGL program: <http://www.epa.gov/oppt/aegl/>.

In summary, priority for protection of the general public is at the AEGL-3 level and above and a protective action (evacuation or shelter) should be provided to the general public at AEGL-2 and above. These criteria reflect Army/DHS/FEMA recommendations and are consistent with planning recommendations for all Extremely Hazard Substances by FEMA, EPA, and the Department of Transportation. Site-specific decisions for off-post responses using AEGLs for protective action strategies are a local CSEPP community decision. State and local emergency managers selecting alternative decision criteria should document the criteria and rationale and coordinate associated planning with the Army and FEMA. The Army will provide modeling and software capability and output based on the described decision criteria.

## Risk Assessment

CSEPP employs its own detailed, site-specific analyses of hazards, vulnerabilities, and risks to the surrounding community at each of the stockpile sites. These analyses provide information that CSEPP communities can use as they conduct their five-step “Threat and Hazard Identification and Risk Assessment” processes (see FEMA’s [\*Comprehensive Preparedness Guide 201\*](#)).

Risk assessment “snapshots” for the Blue Grass and Pueblo sites may be found in Appendices A and B, respectively. Each of these snapshots provides a summary of the location, contents, potential health effects and risks of the associated stockpile.

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# Chapter 3: Administration

*Objective for this benchmark:*

- *Each subgrantee/grantee shall establish administrative support for the Chemical Stockpile Emergency Preparedness Program (CSEPP)*

<p>ESF: N/A</p> <p>Core Capabilities: N/A</p>
-----------------------------------------------

Funding for CSEPP is provided through the Department of Defense Chemical Agents and Munitions Destruction appropriation. Approval and distribution of CSEPP funding involves several Federal organizations including the DOD, the Army, DHS, and FEMA. An understanding of the financial processes used by these organizations to request and distribute funding is necessary to be effective in obtaining CSEPP funding. These financial processes include:

- DOD’s Planning, Programming, Budgeting, and Execution (PPBE) process of resource allocation (which affects all CSEPP organizations); and,
- Volume 44 of the Code of Federal Regulations’ Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments (which affects CSEPP State and local governments).

Most Federal, State, and local government organizations prepare budgets on an annual basis to obtain and allocate required resources. However, since 1962, the DOD has been using a multi-year programming process to obtain and distribute resources within the DOD. As described in the following paragraphs, there are four phases in the PPBE process that all apply to the CSEPP funding process.

- **Planning:** consists of CSEPP plans developed by State agencies and local governments to meet and sustain full compliance. It also consists of the Army guidance developed for responding to chemical accidents/incidents involving the chemical weapons stockpile;

## Guidance

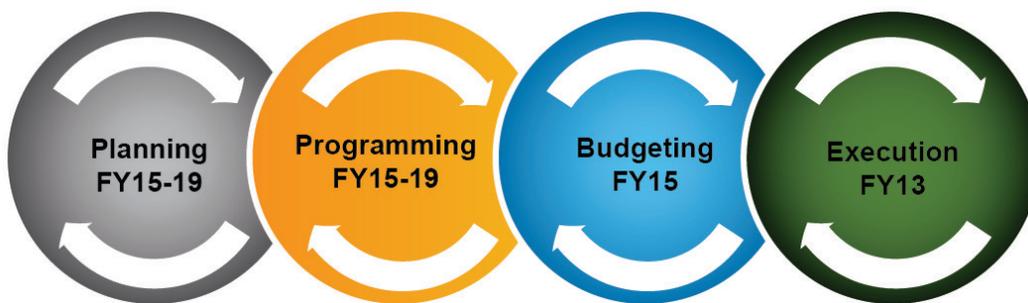
The following guidance is important to the capabilities outlined in the Administration benchmark:

- [FEMA Grant Regulations at 40 CFR Part 13](#)
- [CSEPP WEBCA User's Guide](#)
- [CSEPP Closeout Guidebook](#)
- [Annual CSEPP Cooperative Agreement Guidance](#)
- Annual Department of Defense Authorization and Appropriations Acts
- Annual award memo from FEMA Regional Office

- **Programming** involves translating plans into requirements for future years. For CSEPP this means LCCEs are developed and maintained for CSEPP organization surrounding a chemical weapons stockpile site until all the chemical weapons at that site are destroyed;
- **Budgeting** takes the first year of the programming years and translates it into a budget document which together with all of the other Chemical Demilitarization requirements will be submitted to Congress for that fiscal year's appropriation; and,
- **Execution** is accomplishing the CSEPP mission through the execution of the plans and budget using the appropriated funding for the current fiscal year. For CSEPP States, it also involves quarterly performance and expenditure reporting.

Figure 3 illustrates the current DOD PPBE process that translates an annual state and local budget request into a budget award. The following are a few points of interest from this process from the perspective of FY 2013:

- In FY 2013, the PPBE process develops/updates plans and life-cycle cost estimates for the five programming years FY 2015-2019.



**Figure 3: Continuous Cycle of the DOD PPBE Process as of FY 2013**

## Training

The following training is important to the capabilities outlined in the Administration benchmark:

- [CSEPP WEBCA training and tutorials](#)

- Funding for FY 2013 will come from the FY 2013 Defense Appropriation Bill marked up and approved by Congress during 2012 and signed into law by the President. The PPBE process for this request began five years earlier when the original cost estimate was developed. In the subsequent years, the cost estimate was revised until it was turned in to Congress as part of the FY 2013 Budget Submission in February 2012.
- The budget for FY 2014 will be submitted to Congress in February 2013 and reviewed and marked up by Congress during 2013 as they develop the FY 2014 Defense Appropriation Bill.

Once the CSEPP budget for a FY is submitted to the Army and incorporated into the Department of Defense Chemical Agents and Munitions Destruction Budget Estimate Submission, it is locked against any additional budget requests. Flexibility exists during the execution year to allow financing for unfunded requirements and to meet unforeseen needs or changes in operating conditions, but there are severe restrictions on spending for purposes other than those originally justified and approved. There is a greater probability that funding will be available for the budgeting and execution phases if it is identified earlier in the PPBE process. The following sections provide a more detailed description of all four phases of the PPBE process as they relate to the CSEPP funding process.

## Planning

Because the Chemical Demilitarization Program has been designated a Major Defense Acquisition Program within the DOD, a baseline LCCE must be established for the Chemical Demilitarization Program. This, in turn, requires a CSEPP LCCE that estimates financial requirements for each year the program is scheduled to exist, which can be beyond the FYDP time span. To be effective, these estimates must be based on well thought out operational plans.

For CSEPP, the off-post planning phase of the PPBE process is used to develop and maintain CSEPP plans for State agencies and local governments. These plans aim to meet and sustain full compliance as defined by the Community Profile process. Applying for a CSEPP CA requires developing narrative items with a plan of action including results or benefits expected for each of the CSEPP National Benchmarks. Work plans for CSEPP employees are also required to describe the work they will be doing. Through this process, CSEPP local and State governments program into their respective LCCEs the resources needed to support their plans. Installations must

similarly evaluate the needs of their plans in order to know what requirements to program in their respective LCCEs.

## Programming

During this phase of the PPBE process, CSEPP funding requirements for Army and FEMA support, State and local government, and installations are described in their respective LCCE spreadsheets as line-item entries organized by CSEPP benchmarks for each year that chemical demilitarization operations are scheduled. Funding amounts are expressed in base year dollars for the year the LCCE is being developed or updated. For example, LCCEs updated in 2013 will use Base Year 2013 dollars (what an item costs in 2013) for estimating the cost of all items for all years in the LCCE. This eliminates the need for developers of LCCEs to estimate the inflated cost of an item for the future years. Inflation, based on indices developed by the Office of Management and Budget (OMB) and used by all Executive Departments and Agencies of the Federal Government, is added by the Army to the future year estimates before the FYDP and budget estimates are submitted to Congress.

CSEPP uses two different types of appropriated funds—*Operations and Maintenance* (O&M) and *Procurement* when programming its requirements. Most CSEPP programmed funds are for O&M and are used for salaries, supplies and materials, maintenance of equipment and real property, rental of equipment, and fuel. O&M funds should also be programmed to purchase investment items such as equipment costing less than \$250,000 and minor construction projects. Procurement funding should be programmed for investment items costing more than \$250,000.

Each year, State and local governments update their respective CSEPP LCCEs and enter into negotiations with FEMA to determine the requirements the agency will validate and submit to the Army. The FEMA CSEPP Office also develops its own support requirements for the CSEPP LCCE, as do Army CSEPP installations and the Army's CMA CSEPP Office. All of these requirements are consolidated by the CMA CSEPP Office into the CSEPP LCCE for inclusion in chemical demilitarization programming/budgeting documents. Following that action, the CMA finance management office develops the Program Office Estimate (POE), which is a consolidation of the LCCEs for all of the Chemical Demilitarization Program projects including CSEPP. After being approved by the leadership in the Chemical Demilitarization Program, the POE is used as the basis for the Chemical Demilitarization Program input to the Army's Program Objective Memorandum (POM), which states Army program requirements for the next five program years.

In the POM submission, the Army can, as needed, move program year resources between appropriations and program elements, but not between years. The total program year funding must stay within the total obligation authority set by the DOD. During the programming phase, the funding requests for each program year are reviewed against Congressional language, the

approved Army POE numbers, and the updated LCCE changes. Once the five-year POM is formulated and approved by the CMA Director, it is submitted to the Undersecretary of Defense for Acquisition, Technology and Logistics for inclusion in the DOD POM. The Office of the Secretary of Defense (OSD) Defense Resources Board reviews the POMs, and the results of their review are documented in Program Decision Memorandums. These reviews can direct the adjustment of a POM by increasing or decreasing the approved funding for the program years based on DOD funding limits and overall priorities within DOD. After adjustments are made to the POM, the POM is incorporated into the approved DOD FYDP.

## Budgeting

The first program year of the FYDP provides the data to transition from programming to budgeting. The CSEPP funding requirements are reviewed and, if necessary, the cost data is adjusted. The result is the CSEPP input to the Department of Defense Chemical Agents and Munitions Destruction Budget Estimate Submission. After extensive review by OSD and OMB, the Budget Estimate Submission is included in the President's Budget, which is transmitted to Congress in February.

Funding requests that were not in the FYDP can be difficult to get into the Budget Estimate Submission if offset funds are not available to keep the Chemical Demilitarization Program from exceeding its total funding allocation for the Budget Estimate Submission FY. This highlights the importance of the LCCE part of the process to ensure the best projection of funding needs is used in the Planning/Programming phase of the PPBE. Funding requirements identified in the Planning/Programming phase of the PPBE establish precedence and have more credibility than requirements that are not identified until the budgeting phase.

Each year while Congress is deliberating the CSEPP funding requests in the Department of Defense Chemical Agents and Munitions Destruction budget submissions, State agencies and local governments prepare their budget requests using the budget year in their respective LCCEs as their starting point. In preparing their budget requests, State agencies and local governments follow the CSEPP Cooperative Agreement guidance, which is produced annually and posted on the CSEPP Portal. This document includes guidance pertaining to the period of performance, available funding, cost sharing, funding restrictions, allowable and unallowable costs, indirect costs, and other requirements.

CSEPP budgeting is a bottom up process initiated as local governments prepare their requests and submit them to their respective State agency responsible for CSEPP. The State agency, after developing a budget for its own operations, rolls the local government requests into the State's request. Prior to submitting the State CSEPP requirements to FEMA, Federal, State, and local participants in the process meet to discuss and negotiate any final adjustments to the State's request. Finally, the State CSEPP requirements are forwarded to CSEPP program managers at

FEMA regional offices and FEMA HQ for validation at the Federal level. The goal is to have CSEPP State budgets submitted and validated prior to the start of the new FY on October 1st. Ultimately CSEPP funds will be awarded to the State agencies through CAs. CAs are used instead of grants to support the ongoing collaboration and negotiation between FEMA and the State and local governments when carrying out the activity contemplated in the agreement.

To expedite and standardize the budget preparation, review, submittal and approval, all CA applicants use the software provided on the CSEPPWebCA web site: <https://www.cseppwebca.net>. This software automates the application process as well as the subsequent management of the Cooperative agreement including quarterly reporting, reallocations and amendments, and closeout.

CSEPPWebCA user accounts may be established by submitting a request to the IEM Help Desk at [HelpDesk@cseppwebca.net](mailto:HelpDesk@cseppwebca.net). After obtaining approval from FEMA for the new account, the IEM Help Desk will set up the account and provide the requestor with login information.

Self-help is available on the web site including computer-based training. CSEPPWebCA technical support is available via the IEM Help Desk, Monday through Friday from 8 a.m. to 5 p.m., Central Standard Time at (888) 784-6610 (toll-free). The IEM Help Desk can also be reached by e-mail at [HelpDesk@cseppwebca.net](mailto:HelpDesk@cseppwebca.net).

The Army installations perform a similar analysis of their CSEPP requirements, using their latest LCCE as their starting point. Their respective budgets are reviewed by the CMA CSEPP Office and approved by the CMA Resource Allocation Committee, which meets each spring prior to the FY for the budget being reviewed.

Ideally, Congress passes and the President signs the Defense Appropriations Bill prior to the beginning of the new FY in October. However, if the Defense Appropriations Bill is not law by October 1st, a Continuing Resolution (CR) Bill is usually passed by Congress and signed by the President. A CR Bill keeps the Defense Department operating at the same level of effort as the last FY until the Defense Appropriations Bill is enacted into law. If a CR Bill is required, a portion of the CSEPP budget necessary to pay salaries and keep vital operations functioning will be advanced to CSEPP States and installations. The amount provided will depend on the need of the organization and the length of the continuing resolution. The CA award will be reduced by the advanced CR amount after the Defense Appropriations Bill becomes law and the balance of funding is available to award.

## Execution

Budget execution begins on October 1<sup>st</sup> of each year. During the execution phase, appropriated funds are apportioned, allocated, issued, obligated, and expended to accomplish the CSEPP mission. After Congress approves and the President signs the Defense Appropriation Bill, the

Office of Management and Budget must apportion the appropriations providing obligation/budget authority to the DOD. The apportionment process is a fiscal management tool used by OMB to achieve the most effective and economical use of appropriations and prevent agencies from obligating funds in a manner that would result in a deficiency or require a supplemental appropriation. After receiving the obligation/budget authority from OMB, the Under Secretary of Defense (Comptroller) must make the appropriations available to the Army so that it can issue Funding Authorization Documents (FADs). FADs for CSEPP off-post O&M funding, on-post O&M funding and any Procurement funding for off-post or on-post are issued by the Office of the Assistant Secretary of the Army for Financial Management and Comptroller to CMA through the Army Material Command. After receiving the FAD, CMA sends the off-post funding to FEMA. Before funds can be awarded to the states through CAs, FEMA must apply for and receive apportionment authority from the OMB for distributing the CSEPP funds received from the DA.

FEMA can award two different types of appropriated funds to the states through their respective CAs depending on type of CSEPP appropriations in the Defense Appropriations Bill. Each type of appropriation has a defined obligation period, also known as the period of availability. CSEPP O&M appropriations may be one or two years. The obligation period/period of availability for Procurement funds will usually be three years. These obligation periods/periods of availability are important to the states because they define the period of time the states have to change the scope of their requirements if it should become necessary. Once the obligation period/ period of availability expires, the state must obligate the awarded funding for the stated requirement in the CA or return the funding to FEMA as un-liquidated obligations.

The period of time available to expend the obligated funds is determined by the CA performance period, which can be adjusted by the FEMA Region Assistance Officer. If grantees need additional time to expend their funds they should apply for an extension of their performance period before the current performance period expires. Grantees can also request amendments to their CAs to reallocate funding or to change the scope of their requirements. Grantees must account for their expenditures to FEMA by entering outlays by budget line-item and benchmark status information into CSEPPWebCA. The software will automatically generate the required quarterly financial status and performance reports in accordance with Section 13.41 of the Code of Federal Regulations. [<http://www.gpo.gov>]

If a CSEPP State or local installation is not able to obligate all of its awarded funds by the end of the obligation period/period of availability, these funds may be reallocated to address unfunded requirements if the unusable funding is returned a few months before the end of the obligation period/period of availability. This does not guarantee that the budget will accommodate all unplanned funding emergencies that arise. However, the Army and FEMA will work together to address unfunded requirements as best they can, given the availability of funding.

Figure 4 illustrates the cycle of the entire CSEPP funding process from beginning to end. This process will continue until the U.S. stockpile of chemical weapons is completely destroyed.

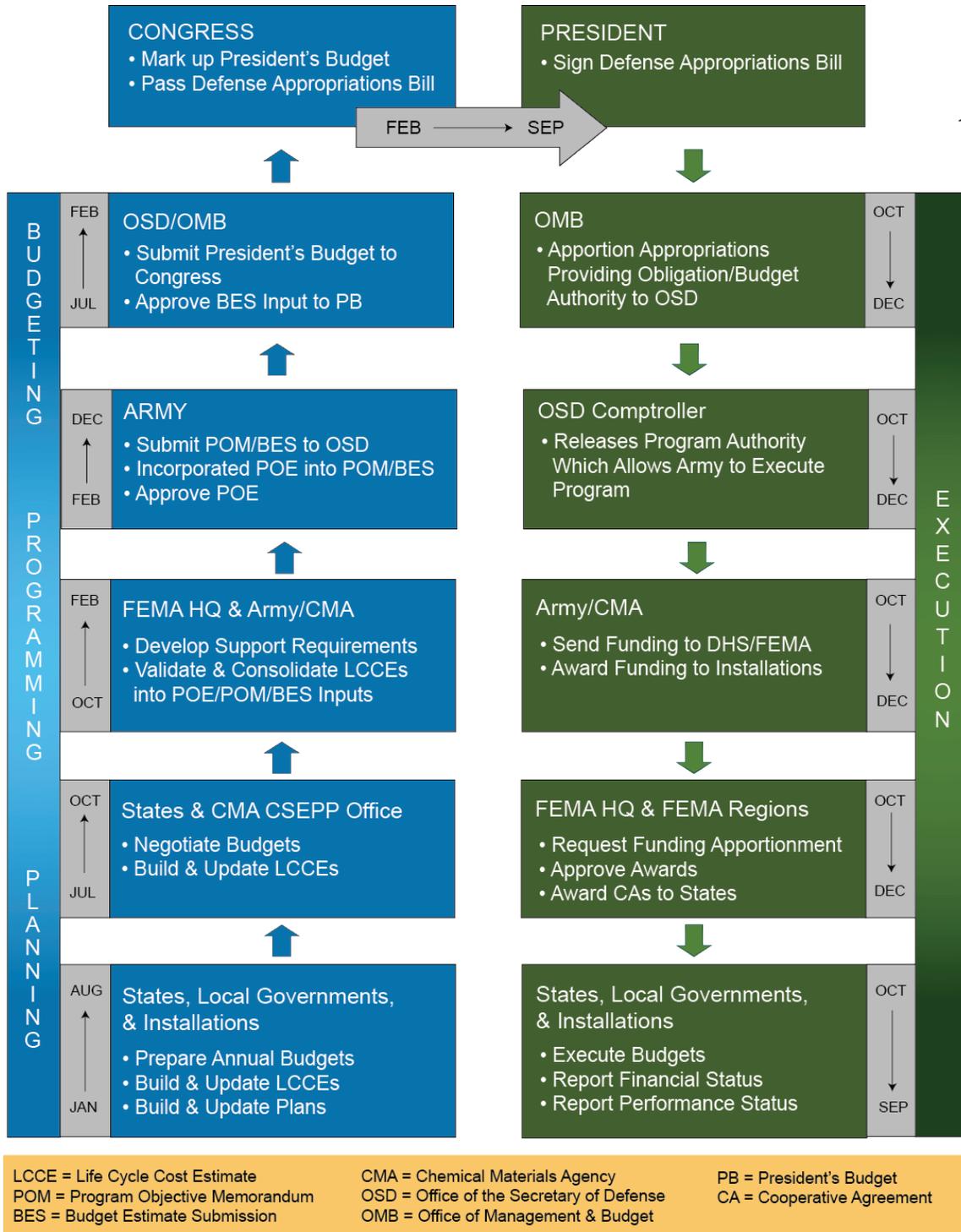


Figure 4: CSEPP Annual Funding Process Cycle

## Program Closeout

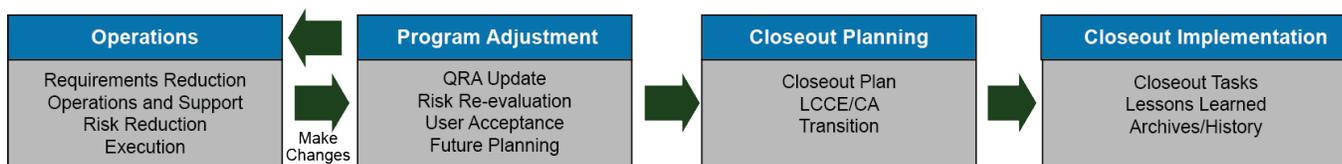
At the end of the performance period for each CSEPP CA, the grant goes through a closeout process. In addition, as the conclusion of the final CA approaches, there is an overall closeout process for the program at the site. The primary objectives of this overall program closeout are to:

- Maintain “maximum protection” for the at-risk citizens in the surrounding communities until the chemical weapons stockpile at each site is completely destroyed;
- Complete the administrative closeout of all CSEPP CAs; and
- Provide assistance to State and local governments to support these activities in accordance with the terms of FY 2008 Department of Defense Authorization Act.

CSEPP has developed a Closeout Guidebook to assist communities by compiling these requirements, as well as approaches, questions to consider, tools, and lessons learned appropriate to these activities. The national Program Closeout IPT prepared this Guidebook to support all phases of the closeout process. The IPT has expanded the Guidebook to reflect new concerns, provide additional tools, and support the transition of State and local jurisdictions to a sustainable post-CSEPP emergency management program. The Guidebook is available on the CSEPP Portal.

### Adjusting the CSEP Program

In the course of disposal operations, as chemical agents and munitions are destroyed, the overall risk to the community is reduced. The intent of adjustments to the CSEP Program is to maintain maximum protection throughout demilitarization operations while reducing CSEPP requirements in line with the quantified reduction of risk to the public. As risk is reduced, there may be opportunities to reduce the role of individual jurisdictions, as well as the resources provided to them. This is not intended to be a continuous process. At the end of the nerve agent disposal campaigns, where a major drop in risk is anticipated, the Army will update the Quantitative Risk Assessments (QRAs) to reevaluate the level of risk and to identify the most credible event scenario for future planning purposes.



**Figure 5: Oversight and Review Process**

Based on the QRAs, the site IPT should lead the discussion on any proposed risk reduction-related efforts, with the goal of joint acceptance of the results. The group may wish to consider a redefinition of their risk-based planning zones, as successfully demonstrated by Maryland’s IPT in 1996. Another example is Alabama’s development of an emergency action risk criterion for the

protection of its citizens. The Alabama CSEPP community adopted the quantitative measure of  $4 \times 10^{-7}$  fatalities per year, or one fatality in 2,500,000 years. In Utah, the community developed a *Glidepath to Closeout* documenting their agreement to future changes in the roles of two counties (based on the ongoing destruction of the stockpile) without a formal redefinition of planning zones. Arkansas also combined its program adjustment and closeout planning efforts to develop separate schedules for the closeout of its IRZ and PAZ counties.

The Army and FEMA HQ should work with the site IPTs throughout the process of reassessing the program requirements. FEMA HQ should work with the FEMA regional office and CSEPP jurisdictions to assess the potential impact of CAIs based on the updated QRAs and validating how these changes affect the required CSEPP capabilities. This should include identification of appropriate planning bases and adjustment of the community concept of operations and required response resources based on the remaining components of the original stockpile. As part of this process, the site LCCE will be updated to reflect the timeline for executing any reduction of capabilities as well as associated revisions to local and State plans and procedures. It is not expected that the percentage of reductions in overall funding or personnel will correlate to the percentage of risk reduction from the stockpile.

In any CSEPP adjustment, a core CSEPP emergency preparedness and response capability must be maintained to ensure the maximum protection practicable for the general population. The value of reducing the CSEPP effort at these sites prior to the end of disposal operations is two-fold. First, gradually dismantling unnecessary equipment, such as collective protection systems and communication devices for counties that are no longer at risk from CAIs, will ease the burden of completing the closeout of CSEPP efforts when disposal operations are complete. Secondly, reducing the CSEPP effort at these sites demonstrates that the Army, FEMA, and States are being good guardians of public funds.

### Transition to Closeout

CSEPP jurisdictions should plan for a smooth and controlled shutdown of the program because successful accomplishment of the chemical demilitarization program will eliminate the need for resources specific to responding to stockpile incidents. Jurisdictions should formally discuss and develop a coordinated closeout strategy addressing the future of existing CSEPP infrastructure, personnel, and capabilities. Communities may want to begin formal closeout planning in conjunction with the start of demil operations. Large-scale planning and inter-jurisdictional coordination can be achieved through the Community IPT or a designated workgroup. At the jurisdictional level, wider participation will likely be necessary to enable the involvement of other organizations affected by closeout (e.g., hospitals) where additional time may be required. Although the closeout strategy may undergo refinement over time, an interim plan will be critical to ensuring that any associated funding requirements are addressed in the LCCE process.

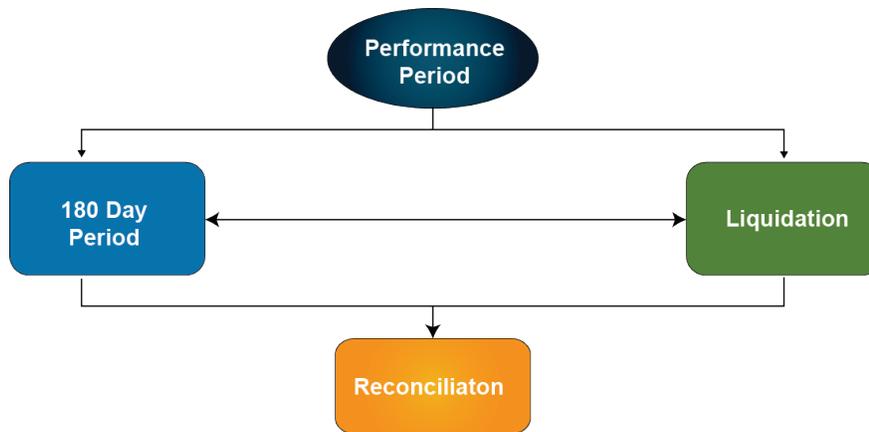
Closeout planning focuses on two major areas: personnel and property. Prior to closeout, an assessment of staffing levels during preparedness and closeout periods can help to identify and ensure funding for critical positions. In addition, jurisdictions should consider how their CSEPP-funded personnel and experience can be transferred to other applicable emergency preparedness and response programs, or what severance and termination procedures may be available.

As early as during the acquisition process, jurisdictions should consider the long-term usefulness of CSEPP-funded facilities, equipment, and systems (e.g., sirens and collective protection systems) and alternative funding sources to support their maintenance. An inventory of equipment and systems (per 40 CFR, part 13) must be maintained and updated every two years; this will be a valuable tool to assist in requests for final disposition of property and transfer of property from a county to an individual department or office during closeout. Special attention may be needed for facilities or any equipment attached to real property (i.e., land). Whether or not any redistribution is envisioned, Federal, State, and local equipment inventory and disposition requirements will need to be reviewed.

Management and timing of contracts, leases, and licenses supporting all phases of operations will also need to be addressed. Plans, procedures, training, and exercises will need to be modified to reflect post-CSEPP risks and response capabilities. Timely communication of anticipated changes in emergency services to elected officials and the public will be especially important (see Appendix A of the Closeout Guidebook for more information). CSEPP should support the completion of transitional activities intended to maintain specific community response capabilities after CSEPP to the extent possible. These issues are addressed in extensive detail in Chapters 2 through 4 of the Closeout Guidebook.

## Post-Operations Closeout

The regulatory requirements governing CAs (see 44 CFR, part 13) describe the activities necessary to close out the CSEPP CA. Each CSEPP community must work with FEMA to complete all required reports, dispose of or return all federally-owned assets, and adjust any monetary awards that are not obligated or spent under the CA. For example, all financial, performance, and other reports required as a condition of the CSEPP CA must be submitted within 90 days of the end of the performance period (although this is an extendable timeframe). Within 90 days of receipt of the CSEPP grantee's final report, FEMA should make any upward or downward adjustments to allowable costs. The CSEPP grantee must then refund any balance of un-obligated cash advanced.



**Figure 6: Post Implementation Process**

As the Army establishes its demilitarization schedule, CSEPP jurisdictions should document specific activities (with associated timeframes and funding requirements) that need to be implemented in conjunction with the completion of disposal operations. These activities may include, but are not restricted to, the dismantling of collective protection systems and sirens, transition of communication systems, and disposition of excess equipment. As necessary, any resources required to support these activities should be identified by each jurisdiction in the LCCE. The funding for those activities intended to begin in advance of the closeout year should be requested in the appropriate year. All activities that will be initiated following the completion of demil (even if they may extend into the next Federal fiscal year) should be budgeted in the closeout year. More details on closeout and the LCCE are provided in Chapter 2 of the Closeout Guidebook.

Grantees should prepare and submit a CA application for their final CSEPP program year, the year in which disposal operations are to be completed. The associated budget and staff work plans can incorporate up to a full year of preparedness costs to address potential small-scale slippage in the disposal schedule. The package should also include any expenses associated with closeout, which may necessitate discussion about an extension of the associated period of performance. All closeout projects will need to be completed within the performance period, after which no new CSEPP-reimbursed expenses (except un-liquidated obligations such as bills for previously contracted services) can be incurred.

If circumstances arise during the final year that significantly delay the completion of disposal operations, another CA application may need to be prepared and submitted to cover the continuing preparedness costs. To address expenses associated with closeout, FEMA should work with the community (based on the revised demil schedule) to determine whether an extension of the previous performance period, or funding of new line items, is more appropriate.

## Funding Implications

All closeout-related activities must be performed in accordance with the applicable legal requirements. Under the public law that authorizes CSEPP, as amended in the FY 2008 Department of Defense Authorization Act, the following restriction has been placed on the availability of CSEPP assistance to State and local governments:

- “Assistance may be provided under this paragraph for capabilities to respond to emergencies involving an installation or facility as described in subparagraph (A) *until the earlier of the following* (emphasis added):
  - (i) The date of the completion of all grants and CAs with respect to the installation or facility for purposes of this paragraph between the Federal Emergency Management Agency and the State and local governments concerned.
  - (ii) “The date that is 180 days after the date of the completion of the destruction of the lethal chemical agents...”

The term “lethal chemical agent and munition” is defined as a chemical agent or munition that is designed to cause death through its chemical properties to human beings in field concentrations. Destruction of these agents and munitions is defined as demolishing, dismantling, or other disposal so as to make them useless for military purposes and harmless to human beings under normal circumstances.

This definition does not include storage facilities, disposal facilities, or secondary waste products that are created as a result of disposal operations. Destruction of these facilities and waste products is a process of the chemical demilitarization program but is not expected to create a risk to the general population as chemical agents and munitions do.

Because of these issues, it is important that the community understand what is meant by the “destruction of the stockpile”—the conditions at the site under which the stockpile will be considered destroyed (e.g., the status of agents, munitions, containers, waste products, and facilities and equipment) and the associated risk. At several sites, there was an agreement to date the start of the 180-day period based on a letter from the Chemical Activity/Depot Commander to U.S. Army HQ announcing the end of surety operations. Funds are available for obligation until the end of the performance period for the associated CA.

Each CSEPP community and each jurisdiction within these communities has established and maintains an LCCE to identify anticipated funding requirements on an annual basis until the end of the program. Until the Army has completed the destruction of each installation’s stockpile of lethal chemical agents and munitions, the Army and FEMA should continue to request and expend appropriated funds to provide assistance to each State that hosts an active chemical destruction effort for the purposes of emergency preparedness and response to a CAI. The most important objective of these funds is to develop and maintain those capabilities required to avoid

fatalities to the maximum extent practicable, should an accidental release of chemical agent occur. The Army and FEMA will fund efforts to complete the closeout of CSEPP following the end of disposal operations in accordance with public law and the CA guidance as discussed in the previous section.



## Chapter 4: Personnel

*Objectives for this benchmark are:*

- *Establish an administrative system for performing day-to-day operations.*
- *Ensure employee job descriptions are developed as needed, detailing each position's specific assignments in the event of an emergency or disaster.*
- *Develop and update employee work plans yearly as part of the Cooperative Agreement package for program funding.*
- *Ensure that vacancies occurring in CSEPP-funded positions are promptly filled with qualified personnel.*
- *Ensure CSEPP personnel coordinate chemical event notifications and other relevant information between installation and community EOCs in compliance with Army guidance and local MOUs.*

ESF: N/A

Core Capabilities: N/A

Trained and qualified personnel are essential to the successful sustainment of installation, county, State, and Federal response capabilities. Plans, procedures, and equipment are useless without people overseeing the effort who are prepared to implement procedures and coordinate response actions. These CSEPP-funded personnel run the day-to-day execution of the program, including the periodic program management tasks required to ensure that emergency responders are adequately trained and equipped to complete their missions.

## Guidance

The following guidance is important to the capabilities outlined in the Personnel benchmark:

- [\*Annual CSEPP Cooperative Agreement Guidance, FEMA\*](#)
- State and Local Personnel policies, regulations, and laws

CSEPP funding will not be provided for public or private sector first responder positions. However, jurisdictions have requested and received support for part-time or full-time personnel associated with CSEPP Benchmarks as well as the following Incident Command System (ICS) positions:

- Administrative Specialist
- Communications Officer
- EOC Manager
- Exercise Officer
- Hazard Analyst
- IT Coordinator
- Logistics Officer
- Medical Coordinator
- Operations Officer
- Planner
- PPE Specialist
- Public Information Officer
- Training Officer

Position-specific work plans for all funded positions must be updated annually in CSEPPWebCA as part of the annual budget request. These work plans describe the connection between the projects and the personnel supported under the annual CSEPP Cooperative Agreement.

Allowable and unallowable costs under the Personnel benchmark are specified in the annual CSEPP Cooperative Agreement Guidance.



## Chapter 5: Coordinated Plans

*Objectives for this benchmark are:*

- *Identify assignments for primary and support roles and responsibilities for all key emergency functions.*
- *Develop procedures for implementing responses to CSEPP events for all emergency officials in public, private, and not-for-profit-sector organizations.*
- *Develop procedures for local implementation of the JIC's concept for emergency public information.*
- *Describe the standard chemical event emergency notification systems being used, as well as appropriate response actions based on each notification level.*
- *Develop policies for the local implementation of a public alert and notification system, in accordance with the local protective action strategy.*
- *Specify the relevant emergency personnel, units, and organizations, and list associated equipment/systems assigned to support response operations.*
- *Ensure personnel are familiar with all letters of agreement, mutual aid plans, and any Memorandums of Agreement (MOAs) or MOUs between local officials and other public, private, and not-for-profit organizations that can provide or direct resources to support a response.*

ESF # N/A

Core Capabilities: Planning

## Guidance

The following guidance is important to the capabilities outlined in the Coordinated Plans benchmark:

- National Disaster Recovery Framework
- [\*Presidential Policy Directive \(PPD\) - 8\*](#)
- [\*National Incident Management System \(NIMS\) document\*](#)
- National Response Framework
- Comprehensive Preparedness Guide (CPG) 101
- [\*National Contingency Plan at 40 CFR part 300\*](#)
- Army Regulation 50-6: Chemical Surety
- [\*CSEPP Recovery Workbook\*](#)

CSEPP plans should capture and document each community's protective action strategies and the specific steps and responsible parties that will implement them. Army installation, State, and local emergency planners should work closely together to develop coordinated plans and related procedures, ensuring that all personnel and resources that may have a role in responding to chemical emergencies are included. These plans should outline CSEPP-hazard-specific roles and responsibilities; relationships between Federal, State, and local governments; and resources and actions required. The plans should be updated regularly and tested during annual exercises to ensure that plans are synchronized and assigned personnel understand their roles and responsibilities.

CSEPP emergency plans must also prescribe mechanisms that minimize the time required to determine the existence and potential consequences of a chemical emergency, pass this determination to appropriate officials, and recommend appropriate responses. Therefore, three of the most critical actions addressed by CSEPP plans should be (1) accurate assessment of the chemical emergency and its potential impact; (2) timely notification of officials and the community; and (3) making and issuing recommendation for appropriate protective actions.

## Authorities and Responsibilities

Plans should reflect the allocation of responsibilities and authorities under statutory authority. There are multiple sources of authority and responsibility for chemical agent response. Environmental response (spill response, assessment, and cleanup) is authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and carried out according to the National Contingency Plan (NCP); immediate actions to warn and protect the public, and decision making regarding off-post protective actions and recovery, are the

## Training

The following training is important to the capabilities outlined in the Coordinated Plans benchmark:

- [CSEPP Training Video: Comprehensive Planning for Technological Emergencies](#)
- [G-235 – Emergency Planning](#)
- [IS-800 series on ESF Functions](#)
- [G-358: Evacuation & Re-entry Planning](#)
- [G-311: Hazardous Materials Contingency Planning](#)

responsibility of State and local officials as governed by State law; and Federal disaster assistance is coordinated by FEMA under the Stafford Act and the National Response Framework.

## Federal Authorities

CERCLA and the NCP govern assessment, response, and cleanup of spills of hazardous substances. CERCLA authorizes the President to act, and the President, in Executive Order 12580, delegated cleanup authority to DOD for spills that occur “on or from” DOD facilities. DOD in turn has delegated authority and responsibility for cleanup to the Army for events that take place on Army installations.

The NCP implements CERCLA and outlines procedures for environmental response. Under the NCP, an On-Scene Coordinator (OSC) is designated to oversee response. The Army installation commander will be the initial OSC in a chemical event. CERCLA and the NCP authorize the OSC to call upon other Federal agencies to provide assistance.

Army regulations and guidance pertaining to execution of OSC responsibilities are found in AR 50-6 and AR 200-1. Emergency planning and preparedness for Army installations is also required by AR 525-27.

The Stafford Act authorizes Federal assistance to communities affected by an emergency or disaster. The usual procedure is that when a disaster occurs, the Governor of the affected State assesses the damage and requests a Presidential declaration of emergency or major disaster. However, the FEMA Associate Director or a FEMA Regional Director can also request an emergency declaration, or another Federal agency can make such a request through FEMA when the emergency concerns a Federal Government matter. Federal disaster assistance is carried out according to FEMA regulations and the NRF. Some portions of Federal assistance may be carried out by other agencies, including the Small Business Administration (SBA) for assistance to

businesses and the U.S. Department of Agriculture (USDA) for assistance to agricultural operations.

## State/local Authorities

Each State has an emergency management act that creates the emergency management agency and infrastructure for emergency response; mandates that emergency plans and procedures be developed; designates certain officials as responsible for taking action to protect the public in an emergency (the Governor, and generally a CEO at the county level); and provides a mechanism for declaring a “State of Emergency” —always at the State, often also at the local level—that activates special response authorities. Responsibility for protecting the health and safety of the public—including measures such as activating alert and notification systems; ordering evacuation or shelter-in-place; closing roads, schools, and parks; and declaring curfews and other protective measures—falls to State and local officials. Exactly who is authorized to make such decisions and their particular emergency powers is a function of State and local law and policy.

## Consistency with National Planning Initiatives

**On-Post Planning:** On-post planning should be conducted in accordance with applicable Army regulations and guidance.

## Army Chemical Accident or Incident Response and Assistance (CAIRA) Response

The Army has specific functions, responsibilities, organizational requirements, and procedures for responding to CAIs and HazMat incidents in general. Key documents include AR 50-6, Chemical Surety; and AR 200-1, Environmental Protection and Enhancement. Installation emergency plans for responding to a CAI are referred to as CAIRA plans.

The Army’s CAIRA effort includes actions to save lives, preserve health and safety, prevent further environmental damage, protect property, secure the chemical agents, and maintain public confidence in the Army’s ability to store and secure chemical agent and related materials. The Army’s response effort includes some key off-post concerns such as public information, event assessment, emergency notification, and coordination of response activities. The term CAI includes any event where a chemical agent is released and threatens or has the potential to threaten unprotected personnel. This can include (1) non-deliberate events (accidents) where safety is of primary concern, and (2) deliberate criminal or terrorist acts (incidents) where security is of concern in addition to safety.

Under CAIRA, the Army establishes, trains, and maintains an Installation Response Force (IRF) at each chemical agent stockpile location to respond to chemical events. In addition, an Army-

wide Service Response Force (SRF) is established, trained, and maintained for deployment in the CONUS as needed. The IRF, under the command of the Army Installation Commander, is prepared to implement CAIRA procedures for immediate response to a release of chemical agents. If a follow-on response effort is required, the SRF is activated to provide sustained operations. The SRF, under the direction of a general officer, includes the IRF and additional staff and teams from various agencies.

Under the CERCLA and the NCP, the Army as facility owner is responsible for response to and cleanup of any hazardous materials spill, including a CAI. When a notice event occurs, the installation notifies the National Response Center as part of initial notification process (along with notifications to State and local authorities, and Army headquarters).

The Federal OSC coordinates NCP response. In the event of a CAI, the OSC will be the Installation Commander while the IRF is operative. If the Army's SRF is activated, the OSC position transfers to the general officer in charge of the SRF.

The NCP provides for assistance from other Federal agencies, particularly the Environmental Protection Agency (EPA). The OSC coordinates and directs all Federal efforts under the NCP, including efforts to reduce (mitigate) the risk of further releases, assess the hazard to public health and the environment, and clean up any contamination.

Off-post planners should be familiar with the installation CAIRA plan, especially those parts of the plan that relate to off-post activities (e.g., emergency assessment and notification, protective action recommendations [PARs], and coordination with off-post actions). Regular meetings and dialogue between community and installation CSEPP staff will help ensure that each organization understands the other organizations' roles, structures, and terminology.

## Federal Response under PPD 8 and the NRF

Effective planning, as described in Presidential Policy Directive (PPD) 8, spans the following:

- Protection/Prevention/Mitigation Planning
- Emergency Response Planning
- Recovery Planning

Planning should ensure that operations in all phases mesh with one another. CSEPP Protection, Prevention and Mitigation planning are the primary responsibility of DA. Emergency Response and Recovery planning are the joint responsibility of on-post and off-post as described in the following sections.

Depending on the severity and circumstances of the event, a CAI may result in activation of the NRF. The NRF may be activated in response to a request from the Governor of an affected state,

or on the President’s own initiative. Activation of the NRF allows the Federal Government to use certain resources to assist with temporary housing, financial aid, and other disaster response measures. If the NRF is activated, a Federal Coordinating Officer (FCO) will coordinate Federal assistance under it. The FCO works with the Governor-appointed State Coordinating Officer (SCO) to prioritize and coordinate Federal assistance. A Principal Federal Official (PFO) may be appointed as a liaison to national assets, depending on the magnitude of the response. The DOD can provide Defense Support to Civilian Authorities as provided for in the NRF. NRF response will be conducted according to the NIMS, which provides a system for coordination of Federal response efforts with State and local efforts.

## State and Local Response

In the event of a CAI, elected State and local officials have primary responsibility for choosing and implementing protective actions for the off-post population, including decisions regarding sheltering, evacuation, and subsequent reentry to evacuated areas. Each state has an emergency management statute that specifies which officials may exercise emergency powers, including the power to declare a “state of emergency” and implement protective actions. Emergency management statutes also typically assign responsibility for emergency planning and preparedness to particular officials and agencies. Under CSEPP, State and local authorities are responsible for developing CSEPP emergency plans (generally as an appendix to an existing all-hazards plan) and coordinating planning and operations with the Army installation.

Army assistance to State and local governments should be provided in accordance with Federal law, Presidential Directives, the NCP, the NRF, DOD and Army regulations and guidance, and local agreements.

**Off-Post Planning:** Off-post planning should be conducted in accordance with applicable FEMA policy and guidance, including the National Planning System concept and the Whole Community approach. CSEPP plans must be consistent with:

- **NIMS:** CSEPP policy is to conduct planning in accordance with the NIMS. Plans should reflect use of the ICS to manage response.
- **National Response Framework:** CSEPP policy is to conduct planning in accordance with the National Response Framework. Plans should take account of the use of the ESF structure for coordinating outside assistance.

- **National Disaster Recovery Framework:** CSEPP policy is to conduct planning in accordance with the National Disaster Recovery Framework.
- **Comprehensive Preparedness Guide 101 (CPG 101):** Each CSEPP organization's Emergency Operations Plan and its CSEPP appendix/annex should be prepared in accordance with CPG 101.
- **FEMA Core Capabilities:** CSEPP plans should address FEMA Core Capabilities appropriate to the hazard.

CSEPP-specific planning requirements should be addressed in a CSEPP-specific appendix or annex to the organization's all-hazards Emergency Operations Plan (EOP). The CSEPP appendix or annex should be based on the installation and community's assessment of the hazards, risks, and vulnerabilities associated with the chemical weapons stockpile. It should be designed in accordance with local, State, and Federal requirements, as applicable, and should be promulgated by the jurisdiction's chief elected or appointed official.

The all-hazards EOP or the CSEPP-specific appendix or annex should provide the following:

- Administrative elements including a signature page, a record of changes, lists of abbreviations and program-specific terminology, a table of contents, and a record of receipt form.
- Assignments for the primary and support roles and responsibilities for all key emergency functions.

### CSEPP EOPs

In August 2004, CSEPP senior management adopted an approach aimed at bringing CSEPP off site EOPs into conformance with provisions of HSPD-5 and NIMS. Henceforward, CSEPP plans would become part of the community's broader all-hazards plans. CSEPP communities should now rely on use of FEMA planning guidance in developing their EOPs and address CSEPP-specific needs in the context of their all-hazards plans. This is possible provided the following points are addressed:

- The CSEPP planning process, which relies on collaborative effort through Community IPTs, conforms to the plan development processes described in CPG 101.
- CSEPP-specific requirements addressed in the Technical Background and Protective Action chapters provide the basis for a CSEPP hazard-specific annex to the community's all-hazards EOP. Further, as provided for in Chapter 10, CMA will respond to technical assistance requests from CSEPP communities.
- The EOPT provides CSEPP communities with a mechanism for developing and maintaining all-hazards CPG 101-based EOPs with a CSEPP hazard-specific annex.
- Communities not using the EOPT should ensure that their plans address the requirements of CPG 101 Appendix C and the elements of Chapter 4 pertaining to children, animals and persons with access and functional needs.

- Detailed agency-specific or position-specific procedures for implementing whole of community responses to CSEPP events for all emergency officials in public, private, and not-for-profit-sector organizations.
- Procedures for the local implementation of the JIS/JIC's concept for emergency public information.
- Descriptions of the standard chemical event emergency notification systems being used, as well as appropriate response actions based on each notification level.
- Policies for the local implementation of the public alert and notification system, in accordance with the organization's protective action strategy.
- Specification of relevant emergency personnel, units, and organizations, and lists of the associated equipment/systems assigned to support response operations in the jurisdiction.
- A schedule for periodically updating annexes and associated standard operating procedures (SOPs).
- Inclusion of, and references to, letters of agreement, mutual aid plans, and any MOAs or MOUs between local officials and other public, private, and not-for-profit organizations that can provide or direct resources to support a response in the organization's jurisdiction.

## Zone Basis for CSEPP Planning

The extent and type of emergency response actions change as the distance from the source of a potential chemical release increases. Greater distance means that more time is available to implement protective actions. In addition, exposure to the hazard also decreases with distance as the concentration of agent becomes lower.

Recognizing that risk varies with distance from the source, emergency planning should be focused on geographic areas close enough to the installation to be considered potentially at risk. These areas are defined to serve as the basis for planning public warning and instruction, public protective actions, and protection of people with access and functional needs.

Two concentric zones are defined around each Army chemical installation. The inner zone is the Immediate Response Zone (IRZ), and the outer zone is the Protective Action Zone (PAZ). The IRZ encompasses an area requiring less than a one-hour response time when exposed to a planning base agent release under "conservative most likely" weather conditions, and extends to approximately 10 to 15 km (6 to 9 miles) from the potential chemical source. The PAZ extends from the outer edge of the IRZ to approximately 15 to 50 km (roughly 10 to 30 miles) from the potential chemical event source, depending on the nature of the stockpile, site meteorology and terrain, and population distribution. The PAZ is the area in which public protective actions may

still be necessary in case of a release of chemical agent, but more time is expected to be available for implementation of protective actions.

Although the considerations described above give representative distances for the boundaries of the IRZ and PAZ, in general the actual boundaries should accommodate local considerations. At most locations, zone boundaries have been adjusted to follow familiar landmarks and boundaries such as roads, rivers, and town or county boundaries. Following familiar landmarks and boundaries simplifies planning and allows emergency instructions to the public to be couched in familiar terms.

CSEPP communities should also have designated sub-zones that divide the IRZ and PAZ into smaller units. Dividing the IRZ and PAZ into smaller units allows instructions to the public to be directed to the affected area based on conditions (e.g., wind direction) at the time of the accident. As part of the CSEPP planning process, the IRZ, PAZ, and zone designations should be integrated into evacuation planning, emergency public information messages, and public education materials.

Specific descriptions for the Pueblo and Bluegrass sites are given in Appendices A and B.

## Protective Actions

CSEPP emergency plans should address the full range of protective actions for installation workers, the public including people with access and functional needs, and emergency responders that are deemed appropriate for the community based on the nature of the chemical hazard and the specific characteristics of the community. Detail on protective action options and guidance on their suitability is provided in Chapter 15. Selection of a protective action strategy for each CSEPP community should be a coordinated and interactive process involving planners and decision makers from the Army installation, the State, and affected local jurisdictions, and be documented in their respective plans.

## Coordination

CSEPP plans should be integrated into other all-hazard plans with as much commonality as possible. Plans for the Army installation, counties, and the State should be coordinated with each other. Agreements (MOAs, MOUs) should be incorporated by reference.

Particular points of coordination that should be covered include:

- On-post/off-post coordination of Alert & Notification.
- On-post/off-post coordination on protective action decisions (PADs) and implementation.
- Coordination of evacuation, reception, and mass care.

- Public education and emergency public information.
- FEMA Core Capabilities.

CSEPP has developed additional guidance and tools applicable to coordinated planning:

- **Emergency Operations Planning Template:** The CSEPP Emergency Operations Planning Template (EOPT) is an on-line tool that allows organizations to develop and maintain their emergency operations plans consistent with current FEMA guidance. The EOPT contains several all-hazards plan outlines drawn from CPG 101 together with reference material specific to each plan section as well as relevant NIMS requirements. The EOPT is designed to allow planners to collaborate on-line to develop and update their EOPs.
- **MOA/MOU Guide:** The CSEPP Memorandum of Agreement and Memorandum of Understanding (MOA/MOU) Guide (May 1999) offers further guidance on agreements to support CSEPP-related preparedness. It gives general information about the process of developing agreements and provides example agreements for nine CSEPP-related functions: information exchange, alert and notification, firefighting, traffic and access control, medical support, joint information systems, sheltering of evacuees, off-post monitoring, and support from other military organizations.

## Special Planning Issues

### Re-entry and Recovery Planning

CSEPP plans should include provision for re-entry and recovery following a chemical event. While much would depend on the details of the event (e.g., the amount of agent released, weather, area affected, time of year), some planning can be done in advance in order to expedite implementation of the re-entry and recovery process.

#### Unified Recovery Plan Recommended

It is recommended that a single, overarching recovery plan be developed to coordinate the activities of the installation, and State and local jurisdictions at a given site. The integrated approach is more efficient from a planning perspective (compared to separate, parallel plans for each jurisdiction) and will facilitate coordination among the organizations. Also, many aspects of recovery must be coordinated in order to be effective. For example, if several jurisdictions put in competing requests to the Army for monitoring services, confusion might result and some important monitoring activities might be delayed. A coordinated plan would ensure that monitoring is conducted in proper order of priority. A single integrated recovery plan can be designed to accommodate the decision-making prerogatives of all included organizations. Jurisdiction-specific annexes may be appropriate in some cases to accommodate the unique needs of particular jurisdictions.

### Resources for Recovery Planning

There are a number of resources for recovery planning, some specific to CSEPP and some more general.

*[The CSEPP Recovery Plan Workbook](#)* (April 2003) is designed for use by CSEPP communities and provides a template for recovery planning. The template includes a basic recovery plan and covers recovery hazard assessment and decision making; management of access to restricted areas; protection of food and water; medical and social services; relocation of residents; public information; claims and disaster assistance; and environmental remediation. The Workbook also provides background, explanatory, and reference materials to aid planners. The Workbook is available as a Microsoft Word file or as part of a recovery planning software package.

The *[CSEPP Recovery Sampling and Analysis Plan Protocol](#)* (April 2008, available on the CSEPP Portal) provides guidance on developing a recovery sampling and analysis plan. It lists necessary components for such a plan and covers pre-event and post-event sampling plan development, data validation procedures, and documentation/archiving.

The *[CSEPP Exercise Policy and Guidance \(aka Blue Book\) \(December 2012\)](#)* addresses recovery functions in Appendix C, under Outcome 8. Appendix F provides specific background information for exercise evaluators about recovery functions that may be demonstrated in a CSEPP exercise. The recovery tasks listed in Appendix C and explained in Appendix F give a summary of recovery procedures. They include initiating environmental remediation, initiating accident investigation, managing access to restricted areas, making and implementing ingestion-pathway decisions (food and water restrictions), medical screening, securing disaster assistance, temporary shelter for evacuees, monitoring and sampling, recovery-phase protective action decisions, implementing reentry, public information during recovery, support services for the Army community, and claims services.

The *[National Disaster Recovery Framework \(September 2011\)](#)* contains FEMA recovery concepts and doctrine, and guidance for pre- and post-disaster recovery planning. It aligns with the NRF and replaces the NRF ESF #14 (Long-Term Community Recovery).

The *[CSEPP Guide for Assistance and Compensation Following a Chemical Event](#)* (June 2009) is a resource on how to seek Federal assistance to those who might experience injury or loss in the unlikely event of a release of chemical weapons agent from one of the storage installations in the continental United States. This guide was developed as a result of emergency exercises indicating that preparedness will be enhanced if an inventory of possible Federal resources is available. The guide is provided for informational purposes only and is not intended as legal advice.

## Planning for Access and Functional Needs Populations

Preparedness for a chemical emergency includes protection of individuals and groups who require special consideration in emergencies. This includes working with facilities that host such populations (e.g., schools, preschools and day-care centers, nursing homes, and hospitals) and provision for individuals with access and functional needs who are living independently. Plans should take account of access and functional needs populations at each stage of the preparedness and response process so that access and functional needs populations are protected at least as well as the general population.

For CSEPP purposes, individuals with access and functional needs include, but are not limited to: the sensory, mobility, or mentally impaired; unattended children; children in preschool facilities; school students; hospital patients; nursing/convalescent home residents; individuals in correctional facilities; individuals living at home with special equipment needs due to medical conditions; chronically ill persons particularly susceptible to agent exposure; people who do not have access to an automobile; and people with limited English-language proficiency.

It is FEMA's policy in accordance with Section 308 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended (Stafford Act), and Federal law to ensure that the Civil Rights of all persons receiving services or benefits from agency programs and activities are protected. Discrimination on account of disability is prohibited. For more information see the FEMA publication: [Accommodating Individuals With Disabilities In The Provision Of Disaster Mass Care, Housing, And Human Services Reference Guide.](#)

Also, a recent Federal court case ruled that the Americans with Disabilities Act (ADA) requires consideration of the needs of disabled individuals in an emergency preparedness program. See *CALIF v. City of Los Angeles* (CV 09-0287 CBM [RZx] U.S. Dist. Ct., Central Dist. CA) (February 2011).

Plans should include measures designed to serve access and functional needs populations as appropriate based on their needs, protective actions that might be required, and available resources for assistance.

During the planning and review process, emergency planners should solicit and incorporate input from special population representatives. The process should include representatives of special population facilities such as school districts, daycare operators, colleges, and hospitals, as well as local representatives from organizations concerned with the interests of people with disabilities. State and local plans should be coordinated with emergency plans for school districts and other local institutions that host access and functional needs populations.

## Planning for Pets

Disasters and emergency situations can have a direct effect on the well being of humans, as well as their household pets and service animals. Although the care and safety of humans must be the primary focus in an emergency, planning for pet evacuation, pet-friendly and temporary animal sheltering is of great importance. CSEPP plans should include a focus on providing rescue, evacuation, shelter, and care to these animals. Every plan should include information on the transporting of household pets during evacuations, pet identification/tracking, congregate household pet sheltering operations, emergency veterinary services, pet search and rescue, emergency feeding, and reporting requirements.

### Additional Guidance for Access and Functional Needs Populations

FEMA's Comprehensive Preparedness Guide (CPG) 101 includes a detailed checklist of issues to address to incorporate consideration of individuals with access and functional needs in emergency planning. CSEPP planners should consult this guide to ensure this need is adequately addressed. Additional guidance and information pertaining to emergency preparedness for access and functional needs populations may be obtained from the following sources:

- A training curriculum for an all-hazards approach for medical responders in CSEPP communities available at: <https://www.cseppportal.net/subsites/Medical.aspx>.
- U.S. Department of Justice, Civil Rights Division, Disability Rights Section. An ADA Guide for Local Governments: Making Community Emergency Preparedness and Response Programs Accessible to People with Disabilities. 30 Sept. 2004. Available online at [www.usdoj.gov/crt/ada/emergencyprep.htm](http://www.usdoj.gov/crt/ada/emergencyprep.htm). See also ADA Toolkit for State and Local Governments, Chapter 7: Emergency Management under Title II of the ADA, available at <http://www.ada.gov/pccatoolkit/toolkitmain.htm>.
- National Organization on Disability. Functional Needs of People with Disabilities: A Guide for Emergency Managers, Planners, and Responders (2009). Available online at [http://nod.org/research\\_publications/emergency\\_preparedness\\_materials/](http://nod.org/research_publications/emergency_preparedness_materials/)
- FEMA, U.S. Fire Administration. Emergency Procedures for Employees with Disabilities in Office Occupancies (FA-154). Available online at <http://www.usfa.fema.gov/downloads/pdf/publications/fa-154.pdf>.
- FEMA advice to pet owners: <http://www.ready.gov/caring-animals>
- FEMA policy on eligible costs related to pet evacuations and sheltering: *Disaster Assistance Policy (DAP) 9523.19* (October 24, 2007)
- Pets Evacuation and Transportation Act (PETS Act), P.L. 109-308 (October 2006).
- Red Cross: homepage for pet safety in disasters: <http://www.redcross.org/prepare/disaster/pet-safety>

Application of the general planning principles presented in FEMA's *CPG 101* should be extended to household pets and service animals planning. This Guide includes a detailed checklist of issues related to incorporating issues related to household pets and service animals in emergency plans. Particular attention should be paid to building a comprehensive planning team with a broad base of knowledge in various disciplines including animal control, animal health monitoring, veterinary medicine, mass care, public information, public health, public safety, government, legal, and other such partners necessary for response.

## Collective Protection

In specific circumstances, institutional populations such as schools and hospitals have been safeguarded through the use of collective protection systems. These systems involve both air filtration and over-pressurization components that minimize the potential for exposure of occupants to a chemical agent plume. Under contract to FEMA, the U.S. Army Corps of Engineers maintains these systems.



## Chapter 6: Medical Preparedness

*Objectives for this benchmark are:*

- *Develop medical guidance that addresses the relevant aspects of worker protection and patient care for individuals potentially exposed to a chemical agent release.*
- *Develop regular medical training for personnel to perform specified patient care activities, such as screening, triage, treatment, decontamination, transport, disposition, and patient tracking.*
- *Develop medical emergency operations that are in accordance with CSEPP guidance and Federal, State, local, and generally accepted standards for patient care and worker protection.*
- *Coordinate medical plans and procedures, as appropriate, with the CSEPP alert and notification system, the JIC, and the JIS.*
- *Ensure that medical personnel participate in community response and recovery planning and community-based exercise and evaluation programs.*

ESF #8

Core Capabilities: Public  
and Private Services and  
Resources

## Guidance

The following guidance is important to the capabilities outlined in the Medical benchmark:

- [Occupational Safety and Health Administration \(OSHA\) HAZWOPER Standard at 29 CFR §1910.120](#)[OSHA Respiratory Protection Standard at 29 CFR §1910.134](#)
- [EPA HAZWOPER Regulations at 40 CFR 311](#)
- [Public Health Preparedness Capabilities: National Standards for State and Local Planning](#)
- [CSEPP Medical Resource Guide](#)
- [CSEPP Medical Evaluation Guides](#)
- [OSHA Best Practices for Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances](#)
- [Emergency Medical Treatment and Active Labor Act \(EMTALA\)](#)
- [Health Insurance Portability and Accountability Act \(HIPAA\)](#)
- [NFPA 472: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents](#)
- [NFPA 473: Competencies for EMS Personnel Responding to Hazardous Materials/Weapons of Mass Destruction Incidents](#)
- [Homeland Security Presidential Directive \(HSPD\) 5](#)

A critical component of any community's ability to respond to an incident involving the release of a chemical agent is the ability to meet the medical needs of those individuals who may have been exposed to the agent. While the chance that such an incident would occur off-post is considered extremely unlikely, a coordinated response by the first response community and hospitals is essential.

As part of the CSEPP's ongoing efforts to improve medical preparedness and response, the CSEPP Medical Work Group (MWG) has developed revised medical guidelines. These guidelines do not supersede current medical or public health practices and requirements. Local health and emergency management officials, working with Army personnel, must analyze the nature of possible releases at each location, determine what kinds of intoxication and what level of contamination might be possible, and match local or regional resources to the potential task.

## Training

The following training is important to the capabilities outlined in the Medical benchmark:

- A training curriculum for an all-hazards approach for medical responders in CSEPP communities available at: <https://www.cseppportal.net/subsites/Medical.aspx>
- [\*CSEPP Training Video: Don't be a Victim! Medical Management of Patients Contaminated with Chemical Agents\*](#)
- [\*CSEPP Training Video: Exposure and Contamination - Factors Affecting the Toxicology of Chemical, Biological and Radiological Agents\*](#)
- [\*U.S. Army Public Health Command Toxic Chemical Training Course\*](#)

Any chemical event will likely place a significant additional strain on local medical service providers, even if off-post areas are not affected by a release. If off-post populations are affected by a chemical release, local medical service providers will have to provide specialized screening and care for large numbers of persons who may or may not have been exposed to chemical agent. The following conditions should be considered in developing CSEPP medical planning:

- The deliberate or accidental release of a chemical agent from a chemical storage facility may significantly impact local medical resources.
- Emergency medical, public health, mental health, and hospital services could be called upon to evaluate and treat a large number of actual or potential casualties.
- The chemical agent treatment and resources may be a significant extension of normal duties and will likely overwhelm the local medical and EMS community.
- Preparation for medical response should include written plans, policies, MOAs, MOUs, and procedures at CSEPP hospitals, field triage and decontamination points, and other locations where responders may encounter potentially exposed individuals.
- Care of chemical casualties may involve identification of agent, decontamination, administration of antidote (if appropriate), burn care (if appropriate), emotional support, and definitive care.
- Chemical agent exposure may result in physical medical consequences as well as long-lasting emotional and psychological effects.
- In case of chemical agent casualties, removal of remains (both human and animal) may need to be anticipated.

## Preparedness Tools

### Medical Resource Guide

The CSEPP Medical Resource Guide was developed as a comprehensive tool to provide the pre-hospital and hospital communities with an all-hazards approach to emergency preparedness that emphasizes chemical recognition, decontamination, and treatment. This guide includes tools, regulations, guidelines, references, and web links. This document is posted on the CSEPP Portal to ensure that the integrity of the resources listed remains intact.

The Medical Resource Guide identifies many fundamental documents necessary for the CSEPP medical community to assist with planning, including standards and guidelines, planning tools, a comprehensive medical concept of operations (CONOPS), response and recovery information, and learning strategies. This guide features three general steps to assist with the development of emergency management plans:

1. Pre-incident Planning and Preparedness – Medical preparedness staff has identified a comprehensive discussion of plans, regulations, and accreditation organizations that deliver guidance to emergency management. Training and exercises provide additional guidance to appropriate emergency response efforts.
2. Incident Response and Recovery – Medical preparedness staff has provided a detailed discussion of the medical CONOPS and recommendations to aid in the transition from response to recovery.
3. Learning Strategies – Medical preparedness staff has compiled a collection of best practices and opportunities for improvement.

### CSEPP All-Hazards Medical Curriculum

An all-hazards approach for medical responders in CSEPP communities has been developed. Using a modular approach, it builds content based on the educational requirements of the student. Individual modules are chemical, biological, radiological signs/symptoms and treatment, special considerations for mass-casualty incidents, decontamination, and PPE. Information contained in these modules is important to communities to provide answers to planning and response issues. The curriculum is available on the CSEPP Portal.

### Medical Evaluation Guidelines

Medical Evaluation Guides (MEGs) for pre-hospital and hospital planners have been created for self-assessment purposes. The CSEPP pre-hospital and hospital MEGs are all-hazard, comprehensive guides that outline the critical elements of a medical response plan. These tools,

which are available on the CSEPP Portal, guide pre-hospital and hospital planners in performing an inventory of their capabilities.

## OSHA Best Practices for Hospital-Based First Receivers

The OSHA document *Best Practices for Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances* provides practical information to help hospitals address employee protection and training as part of emergency planning for mass-casualty incidents involving hazardous substances. Individuals who believe they have sustained chemical contamination may arrive at the hospital and require decontamination before medical care can be provided. First receivers at hospitals are different than first responders in the sense that first responders respond to the incident site and first receivers do not. This being the case, there may be slight differences in what is required of each entity in respect to level of training, regulations, and standards of practice. The Best Practices document includes guidance on victim decontamination, PPE, and employee training.

## Medical Workgroup CSEPP Portal Page

The Medical Workgroup Portal Page provides a repository of historical and current documents helpful to those seeking first responder/hospital information.

## Definition of Medical Providers

### First Responders

The provision of on-scene medical care and decontamination by first responders may include firefighters, EMS, and police officers. First responder emergency services are regulated by State licensing or certification requirements, SOPs, and contractual agreements. Emergency services plans and procedures should be well integrated into the community-wide response to a chemical incident to include integration with community hospital planning.

Emergency Medical Services that would have a responsibility in a CSEPP event need to develop and maintain a medical readiness to competently respond in case of a CSEPP event. These services need to maintain the capabilities to treat and transport patients injured by a chemical agent event. Capabilities include but are not limited to appropriate equipment, supplies, training and participation in exercises.

### Hospitals

CSEPP hospitals maintain capabilities to treat patients injured by chemical agent, including appropriate equipment, supplies, training, and participation in exercises. CSEPP hospitals may be

designated by two different mechanisms: by the Army Chemical Installation through an MOA or through the FEMA/CSEPP approval process.

The hospital's emergency planner should have a clinical background or access to medical subject matter experts and understand the principles of emergency management. The planner should know where to access local plans and formulate a relationship with the local emergency manager. CSEPP planning has been most effective when hospital plans are integrated into community and State plans.

## Public Health

The role of public health in any chemical or biological incident is of paramount importance because these services provide cornerstone resources for early detection, diagnosis, and treatment of health concerns, and strategies for protection against health threats. Public health activities occur at a local, county (regional), tribal, State, and Federal level. Public health strategies for a healthy community include planning, preparedness, and response and recovery activities.

## Other Healthcare Providers

In all CSEPP communities it is important to acknowledge that other health care providers exist such as “free-standing” medical facilities and mental health agencies. Freestanding facilities may include “Insta-Care” walk-in emergency clinics, public health clinics, rural health clinics, community health centers, and private physician offices. Mental health facilities may include hospitals, outpatient clinics, and components of disaster relief agencies, private practices, and governmental entities. These health care providers are part of the CSEPP medical community and should be incorporated into the CSEPP medical CONOPS and receive periodic education on related issues.

## Continuum of Victim Care

Medical planning begins with the on-post medical plans and procedures to handle the most probable event and continues with plans and procedures to mobilize on and off-post medical personnel and EMS in response to a maximum credible event (MCE). Civilian emergency medical response resources include, but are not limited to, local ambulance services (ground and air), local fire services, law enforcement, local and regional hospitals, mental health resources, other healthcare providers, and State/county health departments (public health and coroner's office). The continuum of victim care begins on-post, or at any entry point to the medical system, and continues until final patient disposition occurs.

Veterinary resources may also be a part of the community medical response. MOAs between the installation and certain off-post medical treatment facilities may be required in order to ensure coordination for the continuum of victim care.

## Medical Preparedness and Planning

Preparing for an unlikely off-post chemical incident should incorporate Federal regulations, State regulations, and agency accreditation standards. Medical planning for each CSEPP community involves integration of pre-hospital and hospital services. The CSEPP medical program includes not only hospitals but also public health resources and first responders such as law enforcement, fire, and EMS. Local emergency managers can also provide important information.

## Medical Concept of Operations

Medical preparedness should be based on plans and procedures that detail the medical CONOPS and coordinated response actions to prepare for and respond to a CAI. These medical plans and procedures should be integrated with State and local emergency response plans and those of the Army installations. These plans should include anticipated response, necessary resources, and appropriate training.

The CONOPS should consider as a minimum the following factors:

- The continuum of victim care begins on-post or at any entry point into the medical system (which includes EMS) and continues until final patient disposition occurs.
- The number and type of potentially exposed individuals in the projected plume area.
- The implementation of protective action strategies (e.g., evacuation, sheltering, and collective protection).
- Medical screening, triage, decontamination, appropriate treatment, and transport to CSEPP hospitals or medical facilities for exposed individuals, to include plans for administration of antidote where necessary.
- Strategies for the appropriate use of decontamination equipment.
- Procedures for decontamination of patients and emergency responders per OSHA standards.
- Tracking of victims through the continuum of care.
- Integration with existing HazMat and/or CAI response plans, mass casualty incident plans, and other disaster plans.
- Strategies for incorporation of public health into community planning, response, and recovery efforts.

- Management of a CAI using the ICS.
- Integration of a medical component into the JIS.

Medical training should be included as part of existing State and local programs and should be coordinated as part of an all-hazards approach. Training should be structured to take advantage of existing Federal, State, local, and Army training programs. The *Medical Resource Guide* and the CSEPP Portal contain lists of CSEPP educational opportunities.

## Decontamination Planning

In the rare case where persons originating off-post may have received agent contamination, proper decontamination will be necessary to prevent secondary contamination and chemical injury to medical and rescue personnel. The basic competencies required for decontamination of potentially contaminated persons are the same as those for other hazardous materials emergencies. Additional decontamination guidelines for persons who may have been exposed to chemical warfare agent are located in the *Medical Resource Guide*.

## Medical Funding

CSEPP requirements for medical equipment, personnel, supplies, training, and exercises should be incorporated into the individual states' LCCEs and the annual FEMA CA process. CSEPP regional review and comment on the states' requirements is a key element of the validation process. Details as to those items considered eligible or ineligible for full or partial CSEPP funding will be identified in CA guidance documents.

## Medical Program Assessment

A self-assessment of medical capabilities throughout the community is provided using the Community Profile Tool. Areas to consider include, but are not limited to:

- Communications Systems, Facilities, Equipment, and Displays
- Medical Services – First Response
- Medical Services – Transportation
- Medical Services – Medical Facilities
- Screening, Decontamination, Registration, and Congregate Care of Evacuees

Individual Item Status:

- Selected PPE (Kappler suit, Army boots and gloves, approved powered air purifying respirators) on-hand
- Appropriate stocks of antidote on-hand

- Emergency medical staff at hospitals trained (CSEPP curriculums)

CSEPP MEGs assist pre-hospital and hospital planners in the performing an inventory of their capabilities.

## Exercise Participation

Evaluation of the elements of victim care as defined in the *Blue Book* begins on-post, or at any entry point to the medical system, and continues until final patient disposition occurs. CSEPP hospitals are required to participate in the community's annual CSEPP exercise. They are evaluated according to the criteria described in the *Blue Book*, as well as the emergency preparedness standards set by their accrediting organizations.

### Recommendations for a Full-Scale Exercise

The following elements should be included in each hospital and field decontamination site's extent-of-play agreements for a CSEPP exercise. Responder/receiver organizations should consider demonstrating:

- A very limited use of simulation (the only situations where simulation should occur are in the administration of medications and when, in the opinion of the evaluators, a safety risk exists).
- A demonstration stressing its emergency preparedness systems with multiple patients presenting with chemical and conventional illness and injury.
- A demonstration stressing its emergency preparedness systems with multiple patients exhibiting psychological signs and symptoms.
- Emergency triage, patient tracking, and stabilization prior to decontamination.
- Ambulatory and non-ambulatory decontamination or the demonstrated rationale of why decontamination is not needed.
- Patient tracking throughout the continuum of care.
- Decontamination and antidote administration identification processes.
- Treatment of casualties, including antidote therapy, if indicated.
- Patient disposition.
- Collection and decontamination of human remains.
- Disposition of human remains.
- Use of the ICS and its EOC or Hospital Command Center (HCC).
- PPE donning and doffing procedures.
- Proper use of equipment, i.e., chemical agent detectors.
- Communication with the JIS.

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## Chapter 7: Training

*Objectives for this benchmark are:*

- *Conduct training needs assessments to inventory and track the needs and skill levels of CSEPP staff requiring specific training or specialized skills.*
- *Identify training coordinators for each installation, state, and county to ensure annual training is available as required and that appropriate training materials and measurement tools are used.*
- *Employ competent training instructors based on the needs assessment, ensuring that all training is job-specific and documented.*
- *Assess the effectiveness of each training course and each trainee's performance and ability to meet course objectives.*

ESF # N/A

Core Capabilities: N/A

This guidance addresses training for personnel at the State and local level with specific CSEPP responsibilities. While training related to many program activities is conducted in joint fashion for on- and off-post personnel (notably hazard assessment, exercise evaluation, and public information), Army installation personnel also receive training related to separate Army requirements.

CSEPP training includes both general emergency management subjects and critical program-specific training that addresses a unique hazard responders are not likely to encounter in their everyday experience. Each jurisdiction should have a training program that develops the skills and knowledge necessary for its emergency management and response personnel to plan for and respond to a chemical event. Training should include a combination of classroom and online courses, hands-on activities, drills, and exercises. Training should be conducted in accordance with a training plan and tracked to ensure that all personnel receive initial and refresher training appropriate for their position. CSEPP should provide tuition and travel support for necessary training within available resources.

## Guidance

The following guidance is important to the capabilities outlined in the Training benchmark:

- [CSEPP Exercise and Training Crosswalk with NIMS Integration](#)

## Training Coordinator

Each jurisdiction should identify a training coordinator responsible for developing and updating the training plan, arranging and tracking training, and maintaining training records. This may not be a full time position, but it is a critical duty for the betterment of the entire jurisdiction.

## Training Plan

Each CSEPP jurisdiction should have a training plan that is based on a position-specific needs analysis. For each position in the organization that will respond to a chemical event, it is important to know what training is required for that position (and what would be desirable to have). By conducting a needs analysis, jurisdictions should be able to develop a training schedule that lists both required and optional training for each position, including both initial and refresher training.

## Training Records

State and local governments should maintain the following CSEPP training records as a minimum:

- Training rosters citing the following:
  - People requiring training. (This includes volunteers because they are a critical part of many emergency operations.)
  - People completing training, including the class or type of training, the dates, the instructors, and other relevant information.
- Performance tests and course evaluations used by jurisdictions in conducting post-training evaluations.
- The total number of classes, students, and course offerings available in a given year. (These yearly training totals should be available for the purpose of budget preparation for the Annual Report, and/or to be forwarded to a regional office upon request.)

- Complete records of all expenses for each training activity.
- A file copy of all reports submitted to FEMA.

## Performance-Based Evaluation

Each jurisdiction's training program should include a performance-based evaluation process to assess the effectiveness of each training course (e.g., structure, instructor, and materials) as well as to assess each trainee's performance and ability to meet course objectives. Most states have created a basis for inclusion of outside training into their approved training. These requirements will probably be centered on performance-based training and may establish minimum passing scores and validity review of any tests. Classes taught under CSEPP should meet local and state requirements. Any performance deficiencies noted during CSEPP training drills and exercises should also be included in the evaluation.

## Continuous Review and Improvement

CSEPP reflects the principles of the National Preparedness System components. CSEPP is a mature program where training builds and sustains capabilities and then aids in validating those capabilities. The cycles of exercise and training should overlap as both share a goal of creating a more capable responder, whether paid staff or volunteer. The exercise is part of the performance-based training and should be included in the training process.

Each jurisdiction's training program should include a continuous assessment process that tracks completed training, reviews the current training plan, and identifies new training to incorporate.

### Available Training

Available training courses and recommendations for particular emergency management positions are listed in the

[CSEPP Crosswalk with NIMS and Homeland Security Exercise and Evaluation Program \(HSEEP\) Integration](#). The Crosswalk is designed to aid CSEPP trainers, planners, and managers by listing emergency preparedness tasks and showing their relationships to available planning

The Center for Domestic Preparedness (CDP) develops and delivers advanced training for emergency response providers, emergency managers, and other government officials from State, local, and tribal governments. Located in Anniston, Alabama, the training focuses on incident management, mass-casualty response, and emergency response to a catastrophic natural or human-caused disaster. The CDP offers the only program in the nation featuring emergency response training exercises using chemical agents and non-pathogenic biological materials. The CDP also operates the only hospital facility in the United States dedicated solely to preparing the healthcare, public health, and environmental health communities for mass casualty events related to terrorism or natural disasters. Training at the CDP campus is federally funded at no cost to State, local, and tribal emergency response professionals or their agency. For more information or to register for CDP specialized programs or courses, see <http://www.cdp.dhs.gov>.

guidance, training resources, and exercise requirements. There are hundreds of courses overall, including dozens of CSEPP-specific courses, designed to help CSEPP participants get the best use of all materials that have been produced for the program.

The CSEPP Crosswalk has been improved with updated content from the latest references, expanded NIMS integration, and the addition of HSEEP target capability references. Revised in 2012, the CSEPP Crosswalk:

- Identifies 36 emergency preparedness and response tasks associated with CSEPP incidents, and
- Cross references each task with:
  - Potential Users
  - CSEPP Policy Planning Guidance Sections
  - CSEPP Training Materials and Publications
  - CSEPP Exercise Policy and Guidance Exercise and Evaluation Guides (EEGs)
  - National Incident Management System (NIMS) Sections
  - Homeland Security Exercise and Evaluation Program (HSEEP) Target Capabilities

There are five CSEPP Crosswalk Appendices:

- Appendix A – CSEPP Training Courses
- Appendix B – NIMS Training Courses
- Appendix C – Publications and Other Resources
- Appendix D – Training Recommendations by Personnel Category
- Appendix E – Acronyms and Abbreviations

CSEPP-specific training is intended to supplement – not replace or duplicate – general purpose emergency management training available to CSEPP jurisdictions from other sources (e.g., FEMA emergency management training). To the extent possible, CSEPP jurisdictions are encouraged to take advantage of existing training available from other sources.

## **Training Required to Accompany Field Monitoring and Sampling Teams**

State and/or local personnel may accompany Army sampling and monitoring teams to conduct off-post sampling missions under the condition that they are properly trained, qualified, and equipped in accordance with the OSHA HAZWOPER regulations. Additionally, State or local personnel observing or accompanying the Army sampling teams must be fully trained and certified by the Army in chemical agent awareness and Army chemical agent sampling

procedures. This training should be made available, as resources permit, to State or local personnel who are already trained in accordance with HAZWOPER requirements. CSEPP should not fund HAZWOPER training solely for off-post responders to accompany Army sampling teams.

## Additional Venues for Training and Public Education

Training and public education are critical components in the preparedness of a community to any hazard. Different levels of training and education should be available for all citizens who may be affected by a CSEPP emergency. Public outreach and education (described in detail in Chapter 13) lets people know ‘what to do’ to protect themselves and their families during an emergency. An informed public helps the entire community of responders to more effectively deal with any emergency that may arise.

CSEPP has videos on sheltering-in-place, evacuation, protection of pets and service animals, planning considerations for people with access and functional needs, and response protocols for hazardous materials and medical professionals during chemical incidents. These CSEPP training videos can be streamed live or downloaded through the CSEPP Portal and should be shared with the public (when appropriate) as well as with medical personnel who will be involved in the response or recovery from a chemical accident.

Medical personnel and volunteers require training on both their specific duties and the larger response and recovery plan. Understanding the whole of the response plan will help responders to be more pro-active and allow them to better integrate their specific duties with the roles of other responders.

CSEPP does not credential emergency management or response personnel. FEMA guidance on credentialing of response personnel can be found in the [NIMS Guideline for the Credentialing of Personnel](#).

As with other professional specialties within CSEPP, there are training courses for medical personnel (as described in Chapter 6). It is important that medical personnel receive this training to better understand the types of conditions or situations they may deal with as responders to a chemical release emergency. Volunteers also need additional training so that they understand the limits of their duties and know when to call in professional specialists.

CSEPP developed video training designed for emergency personnel who develop plans for administering assistance to individuals with access and functional needs during an emergency. This video was developed with assistance from FEMA’s Office of Disability Integration and Coordination and was released in FY 2011. This video was awarded a 2012 Aurora Award, an international competition honoring excellence in the film and video industry. By the end of FY 2012, the CSEPP program will release a video on Technological Hazards. This video summarizes

the collective knowledge from both CSEPP and its sister program, the Radiological Emergency Preparedness Program (REPP), about emergency response to technological hazards—either accidental or intentional. A great deal of technical and practical information related to response to both chemical and radiological accidents has been generated by the staff of both programs, and this video captures and preserves this body of knowledge for the emergency management community.

### **CSEPP Training Videos**

The following CSEPP-produced training videos are publicly available and can be streamed live or downloaded from <http://orise.orau.gov/CSEPP>:

- Animals in Emergencies for Owners and Planners (also available in Spanish)
- Business Shelter-In-Place
- Communicating Public Information in Emergencies
- Comprehensive Planning for Technological Emergencies
- Don't be a Victim! Medical Management of Patients Contaminated with Chemical Agents
- Emergency Planning for People with Access and Functional Needs
- Evacuation Planning
- Exposure and Contamination - Factors Affecting the Toxicology of Chemical, Biological and Radiological Agents
- Operations Level Training: A Refresher for Responders
- Residential Shelter-In-Place



## Chapter 8: Exercises

*Objectives for this benchmark are:*

- *Develop and execute exercises that comply with all requirements found in Exercise Policy and Guidance for the Chemical Stockpile Emergency Preparedness Program (the Blue Book).*
- *Evaluate emergency plans, response capability, and training adequacy.*
- *Identify opportunities to improve plans, policies, training, or response resources.*
- *Demonstrate communication, cooperation, and coordination between the Army and the surrounding civilian community.*
- *Ensure continued active participation of key community organizations, the Army, FEMA, State, and local jurisdictions.*
- *Evaluate exercise development and conduct to ensure NIMS compliance*
- *Serve as visible demonstrations of the Army, FEMA, States, and local jurisdictions' commitment to protect the public.*
- *Fulfill Army regulatory requirements for exercises, while designing exercises consistent with initiatives in other hazard programs for greater efficiency and benefit.*
- *Develop exercise planning personnel and processes that can be sustained during the life of the program and after the CSEPP mission is complete.*

ESF #15

Core Capabilities: Public  
Information and Warning

## Guidance

The following guidance is important to the capabilities outlined in the Exercises benchmark:

- [\*Exercise Policy and Guidance for the Chemical Stockpile Emergency Preparedness Program \(Blue Book\). U.S. Department of the Army and FEMA. December 2012\*](#)
- [\*DHS Homeland Security Exercise and Evaluation Program\*](#)

Exercises allow personnel, from first responders to senior officials, to validate training, plans, policies and procedures and practice strategic and tactical actions in a risk-reduced environment. Exercises are the primary tool for assessing preparedness and identifying areas for improvement, while demonstrating community resolve to prepare for major incidents. Exercises aim to help organizations gain objective assessments of their capabilities so that gaps, deficiencies, and vulnerabilities are addressed prior to a real incident. They are a critical component of the continuous cycle of program management that is necessary to maintain readiness.

The Army-FEMA MOU requires a cooperative effort to assess and improve the effectiveness of federal, state, and local response systems and procedures through the design, conduct, and evaluation of exercises. As part of this effort, each CSEPP community conducts an annual exercise to demonstrate its capabilities to respond to a chemical agent release. These exercises follow the structure for planning, conducting, evaluating, and reporting outlined in the CSEPP Exercise Blue Book. An after-action report with corrective actions (described below) is developed at the conclusion to document the results and refine preparedness planning efforts.

A NIMS-compliant response structure requires exercises to validate the procedures and processes adapted by the NRF and NIMS at the community level. Structures to be implemented and exercised within the ICS include the Incident Commander, Unified Command (UC), Area Command (AC), and Multiagency Coordination System (MACS). DOD and healthcare agencies also use similar command structures. Specific guidelines for evaluation of the hospitals that are part of the CSEPP community are referenced in the Medical Resource Guide.

The Exercise page on the CSEPP Portal provides a repository of historical and current exercise-related documents including exercise reports and the controller/evaluator database.

## Types of CSEPP Exercises

There are three types of federally-managed CSEPP Exercises: full-scale exercises (FSE), functional exercises (FE) which are scalable, and tabletop exercises (TTX). They are discussed below. Traditionally, each annual CSEPP exercise is an FSE. FEs and TTXs may be conducted, as required, to meet programmatic needs at either the national or community level. In addition to

## Training

The following training is important to the capabilities outlined in the Exercises benchmark:

- CSEPP 101 (Integrated Performance Evaluation)
- [Master Exercise Practitioner Program \(MEPP\) Series](#)
- [E-131 Exercise Evaluation and Improvement Planning](#)
- [E-132 Discussion-Based Exercise Design and Evaluation](#)
- [IS-120 - An Introduction to Exercises](#)
- [G-146 Homeland Security Exercise and Evaluation Program \(HSEEP\) Training Course](#)

FSEs and FEs, installations and off-post responders may conduct tabletop remediation and recovery exercises.

- An FSE is a mandatory, federally-evaluated demonstration of a community's full capabilities to respond to a chemical emergency. The exercise is driven by an Extent of Play Agreement (XPA), a scenario, and related events that allow for realistic participant response. The negotiated XPA for an FSE is developed to ensure that the community, as a whole, will address all applicable CSEPP emergency response outcomes (EROs).

### CSEPP Emergency Response Outcomes

Outcome 1: Preparedness	Outcome 5: Protection
Outcome 2: Emergency Assessment	Outcome 6: Victim Care
Outcome 3: Emergency Management	Outcome 7: Emergency Public Information
Outcome 4: Hazard Mitigation	Outcome 8: Remediation and Recovery

- The scale of an FE will be determined by the community and the Co-Directors. Like the FSE, an FE initiating event should be related to the stockpile. The FE may be scaled to include a series of evaluated out-of-sequence demonstrations, TTXs, or other training venues as long as the community participates in the Army installation's IRFX, allowing the Army installation to exercise with the community emergency response system (e.g., include A&N, communications, providing of HA information). All CSEPP jurisdictions should participate in the FE.
- A TTX can be used to assess plans, policies, and procedures or to assess types of systems needed to guide the *prevention* of, *response* to, or *recovery* from a defined incident. HSEEP guidance should be consulted for conduct of a tabletop exercise.

The exercise planning team, under the lead of the Army and FEMA Co-Directors, is responsible for exercise planning. The Army and FEMA co-directors are responsible for exercise conduct, evaluation, and the after-action report.

Installations have an Army-mandated schedule of exercises (e.g., quarterly CAIRA exercises). Current Army regulations require at least two CAIRA exercises per calendar year that incorporate the appropriate government and/or non-government off-installation emergency response authorities/agencies identified in plans as having jurisdiction in the IRZ. The CSEPP exercises are conducted annually to test the entire emergency response effort (to include select off-installation emergency response capabilities), evaluate the interaction of all components, and demonstrate the ability of communities to respond to a CAI in coordination with installation procedures. CSEPP exercise staff should assess on- and off-installation response procedures in accordance with established exercise objectives and EROs. Off-post jurisdictions are encouraged to participate in all exercises they consider appropriate.

States and other participating jurisdictions and entities may demonstrate emergency response functions for CSEPP exercise credit at other times (e.g., actual events, CAIRA exercises, Radiological Emergency Preparedness Program exercises, HSEEP, or other FEMA Grant Programs Directorate [GPD] funded exercises). This must be done in accordance with established FEMA policy and as approved by the FEMA Exercise Co-Director. This will be documented in the annual CSEPP Exercise Report.

## Exercise Planning, Conduct, Evaluation, and Reporting

The exercise scenario includes the initiating event and other key events that provide the framework for the exercise response to take place. The exercise planning team has primary responsibility for development of the scenario. Any sensitivity that the installation or surrounding communities may have regarding the contamination of certain areas, particular initiating events, or other restrictions should be discussed before the scenario is developed. The initiating event and meteorological conditions chosen for the scenario must be within the CSEPP planning base to allow demonstration of the emergency response by the community. The CSEPP planning base refers to a table that enumerates all acceptable possibilities for an accident scenario and is derived from the quantitative risk assessments prepared by the Army. The requirement for a potential off-post impact may force the choice of some low-probability, high-impact initiating event.

### Planning the Exercise

An effective exercise program can only be developed and implemented through the close coordination of representatives from all participating organizations. Planning the exercise is a whole community event that brings together the co-directors from the regional office and the Army, State exercise coordinators along with the communities involved. Each member of the team brings critical skills, resources, and guidance to bear on the exercise program. CSEPP has adopted the HSEEP methodology and encourages the states and communities to take a major role

in the planning of the exercises. This process takes the better part of a year and is based on the schedule established in the *Blue Book*.

### Conducting the Exercise

The CSEPP community will be required to demonstrate all applicable emergency response plans, policies, and procedures during the exercise. This requirement applies to the community as a whole, not to just individual jurisdictions. However, each jurisdiction should demonstrate for evaluation all actions in order to support the scenario.

### Evaluation

The CSEPP exercise evaluation methodology is organized around a standard set of eight EROs and is used in planning for and evaluating of each CSEPP exercise. Each ERO is divided into a series of tasks (called Exercise Evaluation Guides) to aid the evaluator in collecting data needed to determine if the outcome was successfully demonstrated during an exercise. EROs, Exercise Evaluation Guides, and supporting performance criteria are provided in Appendix C of the *Blue Book*.

### After-Action Report

The CSEPP exercise report documents the results of the exercise. The report provides a means for recommending improvements, tracking performance, and addressing findings noted in prior exercises. The exercise evaluation and development of the exercise report consists of analysis from the evaluators who observed the exercise play and may include player self-assessment. Development of accurate, useful information requires cooperation and candor between the evaluators, controllers, and players. The format and guidelines concerning the content of the exercise report are found in Appendix A of the *Blue Book*. For FSEs and FEs, the Army and FEMA CSEPP co-directors are responsible for developing and publishing the exercise report.

### Community Profiles

In reporting the annual status of CSEPP efforts, the communities' CSEPP Program Managers provide a self-assessment of their capabilities prior to their annual exercise. This profile matches the current CSEPP National Benchmarks. Assessment of capability is based on community negotiations with the exercise co-directors. The Community Profile should be prepared at least 45 days prior to the exercise for incorporation into both the Exercise Plan (ExPlan) and the final After-Action Report, as described in Appendix A of the *Blue Book*. This profile is a tool for the exercise evaluation team to gain an insight into the community's capabilities, as well as for the community to determine areas needing attention.

Profile capabilities for each of the 12 National Benchmarks are identified as capable, partially capable, marginally capable, or not capable. Each is defined below:

- Capable: fully able to perform emergency response activities (able to respond) in accordance with its plans, policies, and procedures;
- Partially Capable: able to respond, but needs minor improvement;
- Marginally Capable: able to respond, but needs major improvement, or
- Not Capable: unable to respond.

FEMA HQ reports on the chemical stockpile sites' Community Profiles, along with discussions of how the communities are improving and sustaining their capabilities, in the annual *CSEPP Report to Congress*.

The exercise, when combined with the National Benchmarks and other functional areas, assists in developing the overall Community Profile. The exercise results and the Community Profile present annual assessments that drive actions toward improving CSEPP performance over the next exercise cycle.



# Chapter 9: Communications

*Objectives for this benchmark are:*

- *Maintain primary and alternative direct communications systems, providing the maximum practical reliability when used among the jurisdictional EOC, the State, and all off-post jurisdictions.*
- *Use the communication systems to provide public alert and notification and the delivery of other emergency-related public information.*
- *Ensure the availability of back-up power for its communications systems and maintain 24-hour operational capability for its communications linkages.*
- *Develop, maintain, and adhere to standard operating procedures for sending, receiving, recording, disseminating, and validating communications.*
- *Develop and implement a program of regular preventive maintenance of all communications equipment, including a program of regular testing of all communications links.*

ESF #2

Core Capabilities: Operational  
Communications

## Background

Reliable and fully functional communication capabilities are necessary to successfully manage and coordinate emergency response activities. The purpose of CSEPP communication systems is to enable timely, reliable interagency and inter-jurisdictional communications. CSEPP provides for: 1) separate and dedicated primary communication links between the Army installation EOC and off-post warning points, and 2) backup communication links. The dedicated links should be tested daily.

## Guidance

The following guidance is important to the capabilities outlined in the Communications benchmark:

- [DHS SAFECOM Interoperability Basics: State/Region/Urban Area Tactical Interoperable Communications Plan Template](#)
- [Understanding Wireless Communications in Public Safety: A Guidebook to Technology, Issues, Planning, and Management \(2nd Edition, January 2003\)](#)
- [How-To Guide for Managing the Radio System Life Cycle](#)
- [NENA Minimum Standards for Emergency Telephone Notification Systems](#)
- [Federal Communications Commission \(FCC\) rules](#)
- [Plain Language Guide – Making the Transition from Ten Codes to Plain Language](#)
- State and Federal privacy statutes and regulations (fair credit reporting, Health Insurance Portability)
- State and Federal Freedom of Information statutes and regulations
- State and Federal labor statutes and regulations
- Americans with Disabilities Act (ADA)

For all communications systems in place to support a CSEPP event, plans and procedures should provide for periodic testing, maintenance, and evaluation in order to support all the emergency response communication capabilities contained in the benchmarks for alert and notification, EOC operations, emergency public information, ADP systems, and protective actions. All systems used for public alert and notification should receive preventive maintenance on a regular schedule and should be tested at least monthly (daily for dedicated links as noted above). Siren systems should be periodically evaluated to ensure they are of sufficient volume to be heard above ambient noise levels.

The emergency communication system life cycle includes the initial purchase, upgrades, and continuing maintenance of communications equipment and technologies. CSEPP grantees and sub-grantees should comply with the most recent cooperative agreement provisions on communications. The current FY CSEPP CA should be in accordance with and have links to the latest DHS SAFECOM Guidance on Emergency Communications Grants for purchasing and funding the maintenance of communications equipment. SAFECOM fosters the purchase of equipment and planning for interoperability within the framework of the grantees' statewide interoperability communication plans which should apply to all disaster response.

## Training

The following training is important to the capabilities outlined in the Communications benchmark:

- [\*IS-247.a Integrated Public Alert and Warning System \(IPAWS\)\*](#)
- [\*IS-704 NIMS Communications and Information Management\*](#)

In consonance with DHS guidance, the FY 2013 CSEPP CA Guidance includes links to the SAFECOM website (<http://www.safecomprogram.gov>), which has provisions on technical standards that ensure and enhance interoperable communications and the Project 25 suite of standards. [Project 25 Technology Interest Group, <http://www.project25.org>; Association of Public-Safety Communications Officials (APCO) International, <http://apcointl.org>.] Each CSEPP jurisdiction should maintain or be part of a regional Tactical Interoperable Communications Plan that includes governance structures, technology assets, and usage policies and procedures for operation during a CSEPP event. [Interoperability Basics: SAFECOM, <http://www.safecomprogram.gov/library/lists/library/DispForm.aspx?ID=140>]

Interoperability is expected to be further enhanced as the Integrated Public Alert and Warning System (IPAWS) is implemented both within CSEPP and nationally. (IPAWS is discussed in more detail in Chapter 11.)

Important documentation should be retained and maintained on CSEPP communication systems. On-post documentation should follow Army policy. Off-post jurisdictions should develop and maintain documentation to include, as a minimum:

- System “as built” details and diagrams
- Communication path maps and studies
- Propagation studies
- Routine testing results
- MOUs between or among agencies
- All contracts and agreements for equipment and services used by the communications systems (e.g., maintenance agreements, site leases, and access agreements)
- Equipment inventories
- FCC Licenses and station files
- Life cycle plan including cost estimates for all equipment

All jurisdictions should ensure provisions are in place to maintain the reliability, security, and protection for its systems.

- Communications systems require various forms of power. Critical systems should have service from both commercial and emergency power sources.
- Communications systems should have robust grounding. More information on power and grounding can be found in the EOC chapter.

The communications capability should be self assessed at least annually by the community using the Community Readiness Profile as provided for in the *Blue Book*. The Communications Benchmark should be assessed during each CSEPP exercise. Communications crosses most of the EROs, which have specific emergency evaluation guidelines (EEGs) relative to communications, including both the systems and how those systems are employed in transmitting information. The community's self-assessment should be combined with the exercise formal evaluation and used as the basis for the Communications Benchmark input for the annual Report to Congress.

FEMA and the Army are available to assist with the technical requirements, interoperability implementation, IPAWS, and other issues as they arise.

## Concept of Operations

Communications is the process of transmitting information through verbal, written, or symbolic means. Throughout all phases of CSEPP operations, good communications are vital. The communications benchmark focuses on the need for a highly “reliable” means to transmit information. Other benchmark chapters deal with the substance and nature of the information to be communicated relevant to specific subject matter and audiences (e.g., A&N, Medical, PA, and Outreach).

Critical communications functions require redundancy. A communications network, consisting of redundant telephone and radio systems, should link the Army installation notification point (usually its EOC) with the EOCs and notification points of all IRZ counties and states. Regardless of whether the telephone or radio system is designated the primary method of communication, the other system must be provided to serve as a backup. Both primary and alternate systems must have high reliability.

On- to off-post initial notification should be handled in a way that gains the attention of the off-post personnel and provides needed information. This initial notification must go to a facility staffed around the clock, capable of further disseminating the messages and activating resources within time frames that will ensure protection of the population at risk. Systems must also provide for timely interagency and inter-jurisdictional communications.

Once off-post coordinating agencies have received the initial information, they must be able to communicate with, activate, and mobilize their respective response units, such as law enforcement, fire, emergency medical, rescue, and other public safety resources, as well as governmental, health, school, and other special facility authorities. Communicators must be able to handle information related to chemical emergencies accurately and quickly because of the nature of the hazards. As local emergency plans are updated, internal communication protocols should be reviewed and modified as needed to ensure rapid and accurate information transfer.

## Applications

The types of communications systems in Table 6 are listed with some of their key features. A combination of these applications can be used as a part of CSEPP to send messages based on the availability of the system, user's ability, and the intended audience.

These systems can be one-way or two-way communications systems. Two-way communications provide the ability for the user to get immediate feedback to verify that the audience understood the message. One-way systems do not allow for immediate feedback, and require very careful message development. Emergency information provided by such one-way messages must be easily understood by the recipient (e.g., temperature stated in Fahrenheit or Celsius). One-way communications should always state who, what, where, when, and why using clear simple language.

**Table 6: Communications Systems Applications**

<b>Application</b>	<b>Primary/ Secondary</b>	<b>Intended User/Audience</b>	<b>Time Frame</b>	<b>Description</b>
Public Safety Radio System	P	EOC, Dispatch, Responders	Immediate	Two-way system used by field users. This has the benefit of being familiar to the users but may be impacted by interference and failure.
Amateur Radio	S	EOC, Shelters	Immediate	Two-way system operated by specially trained volunteers. Usually operators have good technical skills but may not understand the environment or operational impact.
Hot Lines	P	EOC, Fixed locations	Immediate	Two-way system can operate from fixed locations. These systems provide indications of where a call originates.
Telephones (landline)	P	EOC, Shelters, Fixed locations	Immediate	Two-way system that can be used at many locations. Is open to the public and can congest quickly. Use of GETS is recommended.
Telephones (wireless)	S	EOC, Shelters, Responders	Immediate	Two-way system that can be used at many locations but requires coverage from provider's infrastructure. Is open to the public and can congest quickly. Use of WPS is recommended.
Telephones (satellite)	S	EOC, Shelters, Responders	Immediate	Two-way system that can be used at many locations but requires coverage from provider's infrastructure. Usually there are a limited number of devices in key locations as back up communications.
Facsimile	S	EOC, Shelters, Fixed locations	Near term	One-way system that relies on the telephone system.
Teleconference bridges (telephone and video)	S	EOC, Shelters, Responders	Near term	Two-way systems that allow multiple users to communicate at the same time.
Web-based EOC Software	P or S	EOC	Near term	One-way system that can be used to gather information from various locations to store in a central location.

Application	Primary/ Secondary	Intended User/Audience	Time Frame	Description
WebPuff <sup>TM</sup>	P	EOC	Immediate	Two-way system used to share plume modeling data, scenario information, PARs, and PADs, and other critical event information. May also be used as an event notification system if followed up by a human in the loop confirmation. Limited to fixed sites with access to the appropriate server.
Alert Sirens/PA	P	Public	Immediate	One-way system for alerting the public of emergencies. Limited information available and must be followed up with where to get detailed info. Visitors may not know the intended meaning of messages.
Tone Alert Radios (TARs)	P	Public	Immediate	One-way system that can be used to alert the public and provide some additional information of actions required. Limited to fixed sites that have these devices.
Pagers	P or S	EOC, Shelter, Responders	Near Term	One-way system that can be used to notify users of actions needed. These systems are often best-effort delivery and have some latency based on the system and usage levels at the time of use.
E-mail	S	EOC, Shelters, Responders	Delayed	One-way system that can be used to send long messages or detailed information such as lists. Is best-effort delivery and relies on the receiver to take an action to see the information.
Emergency Calling Systems	P	EOC Staff	Near term	One-way system that can be used to notify users of actions needed. These systems are often best-effort delivery and have some latency based on the system and usage levels at the time of use.
Emergency Calling Systems	S	Public	Near term	One-way system that can be used to notify users of actions needed. These systems are often best-effort delivery and have some latency based on the system and usage levels at the time of use. Transmission of TTY signals is required for equal access.
EAS	P	Public	Near term	One-way system for alerting the public and providing a limited amount of information. Is constrained by the available types of messages the system allows.

Application	Primary/ Secondary	Intended User/Audience	Time Frame	Description
IPAWS	P	Public	Near term	One-way system for inputting messages to other systems used for alerting the public and providing a limited amount of information. Is constrained by the available types of messages the system allows.
CMAS	P	Public	Near term	One-way system for alerting the public and providing a limited amount of information. Is constrained by the available types of messages the system allows. This uses text messages to wireless phones and as such may reach visitors easier.
Highway Traffic Radios	S	Public	Near term	One-way system for alerting the public and allows more detailed information. Is constrained by the available transmitters in the area and the public to tune to these stations.
Message boards	S	Public	Near term	One-way system for alerting the public and providing a limited amount of information. Is constrained by the size of the sign and the ability of a driver to read the sign.
Social Media	S	Public	Delayed	One-way system that can be used to provide information to the public. This can be used to help reduce rumors, and in some cases as a method to get reports from the public.
Press Release	S	Public, Media	Delayed	One-way system that allows for information to be sent to the media. Although information is sent, that does not mean it will be relayed to the public.
Press Conference	P	Public, Media	Delayed	Two-way system that will allow the media to give feedback and expand their understanding of the situation. Not all of the information from the press conference may get to the public.



# Chapter 10: Automated Data Processing

Objectives for this benchmark are:

- *Adopt an integrated ADP system that supports an accredited Army chemical hazard prediction modeling software system, the community's protective action recommendation procedures, alert and notification protocols, and event notification and management to meet specific community needs.*
- *Ensure that the ADP system incorporates emergency management software and chemical hazard prediction software, featuring a browser-based interface and appropriate security features.*
- *Ensure that the ADP system meets State and county information technology standards and requirements for hardware and software.*
- *Ensure that the ADP system meets Army network security requirements, as defined by the Department of Defense Information Assurance Certification and Accreditation Process (DIACAP).*
- *Ensure all automated communications are CAP-compliant and consistent with the Incident Command System.*

ESF # 2

Core Capabilities:  
Operational  
Communications

## Concept of Operations

### Automation Systems

Information management systems collect, store, organize, and archive data to provide decision makers with selective data and reports to assist in managing and controlling projects, resources, activities, and results. Automated Information Systems (AISs) can provide important assistance in performing many of the planning functions described in this document. The quickness with which a chemical agent incident could affect Army and civilian populations necessitates use of

## Guidance

The following guidance is important to the capabilities outlined in the Automation benchmark:

- [CSEPP Portal User Guide](#)
- [WebPuff 5.0 BOM](#)
- [WebPuff User Guide](#)
- [WebPuff System Architecture](#)
- DIACAP Department of Defense Instruction Number 8510.01, DOD Information Assurance Certification and Accreditation Process (DIACAP), 28 November 2007

automated tools to help perform complex analyses during planning and managing the deployment of personnel and resources for response efforts. AISs can assist in the development of plans and procedures by organizing information pertaining to response personnel and resources so that it can be rapidly recalled and acted upon during response.

State and local jurisdictions are strongly encouraged to make maximum use of automation tools that have been developed for CSEPP, as well as evaluating commercial off-the-shelf systems. As new tools are developed or made available they should be rapidly evaluated and integrated into operations if they are found to be of worth.

## Background

All chemical stockpile sites (to include HQ CMA) and local and State EOCs require functional, automated data processing systems that can rapidly produce a hazard prediction of a chemical agent incident, as well as to communicate this information rapidly among EOCs and JICs. This requires a validated, verified, and accredited automation tool that is reliable (functional when needed) and can be employed with minimal training requirements. (DA Pamphlet 385-61 requires a specific methodology for the chemical plume model; CMA verifies and validates the model and the Army Safety Office provides accreditation.) The success of using such software depends on its ability to predict the behavior of chemical agent plume travel using local, real-time meteorological conditions for the determination of all zones impacted, while accounting for local protective action strategies, daily work plans, event alert and notification procedures, and documenting EOC actions in status boards and logs. These decision-support tools provide decision makers and emergency responders with valuable data formatted for rapid assessment, which can then be communicated over the alert and notification system to the zones impacted and other EOCs.

## Training

The following training is important to the capabilities outlined in the Automation benchmark:

- WebPuff \*
- [\*DETech 23 – Introductory Chemical Hazard Prediction \(CHP\) Using WebPuff\*](#)
- [\*DETech 36 – Scenario-Based Chemical Hazard Prediction \(CHP\) Training\*](#)

A three-year curriculum of recommended training is available on the AIPT page of the CSEPP Portal.

To ensure this capability is sustained, all EOCs must adopt an integrated automated data processing system that supports an accredited Army chemical hazard modeling software system, PAR determination and alert and notification protocols, and event notification and management to meet specific community needs. Such systems should incorporate emergency management software and hazard-prediction software, featuring browser-based interfaces and appropriate security features. They also should meet State and county information technology standards and requirements for hardware and software systems.

Capabilities to be provided by emergency management automation systems developed for CSEPP should address the following issues:

- The system should be robust and reliable – and function when needed.
- The automation system should be capable of projecting the chemical plume path and timing, identify zones impacted, and develop a PAR for each impacted zone.
- The automation system should continuously transmit local, real-time meteorological data for use in chemical plume projection and display and archive the data.
- There should be a continuous exchange of information between the Army depot and affected civilian jurisdictions to coordinate planning, exercise, response, and recovery actions. During an event notification, there should be an immediate exchange of information followed by positive confirmation.
- The automation system should be used for both daily operations and emergencies, documenting actions in work plans, status boards, and logs.
- In addition to the automation system, there should be an alternate means of communication between the on-post EOC and a local point of contact that can be used to alert the local off-post EOC of an imminent notification. Despite the fundamental requirement for an automation system to manage emergency management information, the primary means of notification of an emergency remains telephonic (need reference).
- Future automation system capabilities are endorsed by the Automation IPT and approved and prioritized through the WebPuff<sup>TM</sup> Configuration Control Board.

The Automation IPT page on the CSEPP Portal provides a repository of historical and current documents related to Automation issues.

## Infrastructure and Applications

### WebPuff™

Computerized tools are especially valuable in performing complex modeling (including chemical plume projection, general public protective actions, and sheltering/evacuation modeling) to assist planners and decision makers in developing the most effective protective action and response strategies. Atmospheric dispersion models, although imperfect, are the best tools for the estimation of the hazard in the event of a chemical agent incident. Emergency response procedures can be input into an automated system where their adequacy and comprehensiveness can be tested and they can be organized for rapid activation during an emergency. In addition, routine operations such as meteorological data, chemical agent monitoring logs, and status boards can be automated to ensure that significant changes in conditions are recognized quickly and acted upon appropriately.

Automation can assist in these efforts through organizing and analyzing the data collected and using computerized models to identify the extent of the area impacted and the degrees to which various portions of this area have been impacted. The results will help decision makers complete the response phase of the emergency (e.g., exit shelters) and determine what actions, if any, are needed for the recovery phase, when people may safely return to affected areas.

WebPuff™ is an automated information system jointly used by U.S Army (on-post) and civilian (off-post) jurisdictions. The purpose of WebPuff™ is to make a sufficiently detailed and reliable prediction of the effects of a chemical agent release so that informed decisions can be made as to whether the surrounding population should seek shelter, evacuate, or do nothing in response to the event.

WebPuff™ is an Internet Protocol network-based system that consists of server applications and associated data and workstations running a web browser such as Microsoft Internet Explorer or Mozilla Firefox. Using the browser, users have full-functional capabilities to create and publish scenarios, protective action recommendation and decisions, daily work plans, logs, and status boards. Each CSEPP depot or arsenal has an EOC with a WebPuff™ server. The on-post depot EOC coordinates with off-post EOCs in surrounding counties as well as State centers. All of the off-post EOCs also have WebPuff™ servers and workstations. The depot server communicates with the off-post servers. Within WebPuff™, D2-Puff is the software algorithm (method or formula) used to make predictions concerning the dispersion pattern, timing, and concentration levels of a release of a chemical agent into the atmosphere. More information on WebPuff™ is available on the Automation page on the CSEPP Portal.

## Meteorological Towers

CSEPP maintains a meteorological network on the Army depots and in the bordering county to support chemical plume modeling and protective action strategies of the local communities. The network consists of towers, instruments, data control platforms, radio transmission equipment, and servers dedicated to assemble, display, and archive the data. Local real-time meteorological data provides critical information for plume models on the potential path and severity of a chemical plume. The data is used within the atmospheric dispersion model to predict the location, timing, and concentration of the chemical plume. The meteorological data is provided continuously and automatically through the automation system to the D2-Puff model for real-time, continuous projections of potential plumes. With the addition of county data, the model provides reliable plume projections for all potential impacted areas from a chemical incident. To ensure the data is real-time, the data should be updated every 15 minutes.

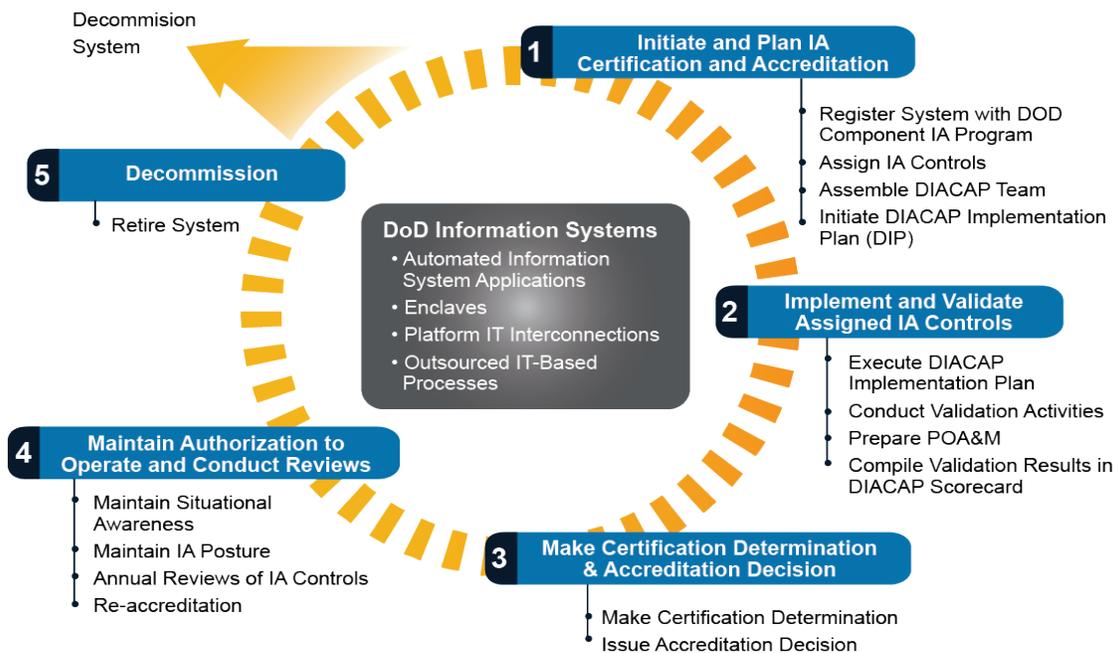
- The functional specifications for automation systems only require off-post authorities to have access to data from Army meteorological towers. Essential meteorological information is to be obtained from both the on-post and off-post meteorology systems via the automation system. Off-post authorities have access to both sets of meteorological records through the MetViewer tab of WebPuff™.
- Initial hazard projections are the responsibility of the on-post authorities, using weather data from the site of the incident.
- WebPuff™ provides off-post authorities with access to data from existing on-post meteorological towers. Data from both the on-post and the off-post meteorological towers are available through the MetViewer tab of WebPuff™.
- Each state participating in CSEPP may be provided with a limited wind monitoring capability.
- The provision of this apparatus should not entail the funding of additional staff for the affected jurisdiction(s).
- Off-post wind monitoring should include up to four anemometer units, one at each monitoring site. Each off-post monitoring station should include the capability to transmit meteorological data to the EOC for the IRZ jurisdiction. Additional meteorological instruments to monitor temperature, humidity, and/or pressure are not required, but may be included under this policy.
- Support for the off-post meteorological monitoring stations should include: automated data checks, and manual data inspection. Maintenance and calibration of the monitoring stations should occur twice a year, approximately once every 6 months.
- WebPuff™ includes functionality to allow individual instruments and/or entire monitoring stations to be disabled. This is important when problems are discovered with

measurements from a particular monitoring station. This prevents bad and/or suspect data from being used in the hazard prediction.

## Network Security

Automated data is exchanged between Army and civilian jurisdictions through a dedicated network, called the Chemical Stockpile Wide Area Network (CSWAN). The primary purpose of the CSWAN is to provide enhanced connectivity between each local Army storage facility and the surrounding State and county EOCs. The CSWAN also provides connectivity between the chemical depots and CMA HQ, as well as connectivity to the Non-Classified Internet Protocol Router Network (NIPRNET).

The CSWAN must meet all Department of Defense IT information assurance (IA) requirements, specifically the Department of Defense Information Assurance Certification and Accreditation Process (DIACAP). DIACAP is the DOD procedure for identifying, implementing, validating, certifying, and managing IA capabilities and services, expressed as IA controls, and authorizing the operation of DOD information systems.



**Figure 7: DOD Information Systems Life Cycle Phases**

The three-year DIACAP Life Cycle Phases of an IT system are shown in Figure 7. Both the software application (WebPuff™) and the network (CSWAN) meet the DIACAP requirements and both maintain a separate DOD Authority to Operate.

## CSEPP Portal

The CSEPP Portal, [www.cseppportal.net](http://www.cseppportal.net), is a web-based information sharing and collaboration site using Microsoft SharePoint™ software. It sustains the close, regular collaboration and communication necessary between partners across the nation that support the sites in Colorado and Kentucky. The Portal consists of two elements:

- An external side provides the emergency management community with access to CSEPP training and other resources, as well as general program information (and links to community web sites) for members of the public.
- An internal side hosts a vast library, including presentations from stakeholder meetings, a program-wide event calendar, news coverage, photo library, as well as the Army, FEMA, and other Federal guidance. As a Portal, it links to all CSEPP-related web sites and Social Media at the local, State, and Federal level. It also enables communities and working groups to collaborate remotely on projects with their own document libraries, task lists, calendars, and links.

Access to the internal side is available via password to all program partners on request from the Webmaster. Although individuals can post information on their own, each component of the Portal also has its own identified Content Manager from the community to provide technical assistance. For those unfamiliar with Microsoft SharePoint™, the *CSEPP Portal User Guide* and task-specific tutorials are located on the support page. In addition, user- and project-specific training is available from the Webmaster.

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# Chapter 11: Alert and Notification

*Objectives for this benchmark are:*

- *Develop and maintain alert and notification procedures addressing specific roles and responsibilities, including initial activation of warning systems, selection of warning messages, confirmation of activation, repetition of warnings, and issuance of all-clear messages.*
- *Develop and maintain scripted, system-specific warning messages based on the site's chemical event emergency classification system and a predetermined protective action strategy.*
- *Maintain the ability to control the alert and notification from two systems.*
- *Maintain a 24-hour operational capability for both initial and ongoing alert and notification activities.*
- *Maintain a current program of regular preventive maintenance and testing of all elements of the primary and alternate alert and notification systems.*
- *Evaluate the effectiveness of the alert and notification system periodically to ensure that alert signals and notification messages in each area of the IRZ are of sufficient volume to be heard above ambient noise levels.*

ESF # 5

Core Capabilities: Public  
Information and Warning

Alert and Notification (A&N) addresses the notice and information dissemination process implemented when a real or possible chemical event takes place. When activated, the process pushes information to on-post and off-post populations believed to be at risk. It addresses the time-critical functions that are the public's primary protection in the event of a chemical agent release.

The expected outcome of this benchmark is that each CSEPP facility (on-post) and affected off-post jurisdiction has the ability to provide timely warning and notification to at-risk populations.

## Guidance

The following guidance is important to the capabilities outlined in the Alert and Notification benchmark:

- [\*Army Regulation 50-6: Chemical Surety\*](#)
- [\*EPA AEGL Guidance\*](#)
- [\*FCC Regulations at 47 CFR part 11\*](#)
- [\*CSEPP Site Alert and Notification MOA, Notification Form, and SOPs\*](#)

This section provides initial background and terminology, then presents key components of the A&N Concept of Operations, including: procedures for alert and notification of the public, warning point communications and protocol, format and content of notification messages, measures for special populations, restrictions on release of information in suspected terrorism or criminal events, and other notifications. This section also addresses alert and notification infrastructure including notification systems and testing.

## Background

A real or possible CAI will first be noticed on the Army installation where it takes place. Installation personnel will then be responsible for notifying other on-post personnel and off-post authorities on a time-critical basis. If protective action is needed, alert and notification to the on-post and off-post public becomes a vital and time-critical process to minimize potential health impact.

Communications that are critical for public alert and notification take priority over other urgent notifications. These other notifications (see Other Army Notifications below) occur as time permits among local, State, and Federal agencies, including higher authorities within the Army.

## Terminology

CSEPP alert and notification procedures incorporate the following terms:

### Acute Exposure Guideline Levels

AEGLs are developed by the National Research Council's Committee on Toxicology. The AEGL criteria take into account sensitive individuals and are meant to protect nearly all people who may be exposed to a toxic chemical. The guidelines define the following three-tiered AEGLs:

- AEGL 1: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable

discomfort, irritation, or certain asymptomatic non-sensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.

- AEGL 2: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.
- AEGL 3: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening health effects or death.

AEGLs have been set for nerve and mustard agents. Information about AEGLs in general, and specific information about the chemical warfare agent AEGLs, may be obtained from the U.S. EPA's AEGL webpage: <http://www.epa.gov/opptintr/aegl/index.htm>.

### **Chemical Event Notification Levels**

A standard system for classifying chemical events is used to simplify and clarify emergency communications from the Army installation to the off-post community. Four Chemical Event Notification Levels (CENLs) are used in notifications:

1. Non-surety Emergency
2. Limited Area Emergency
3. Post Only Emergency
4. Community Emergency

The CENLs are defined according to expected hazard, as shown in Table 7. Note that “chemical effects,” a term used in the table, may refer to AEGL-1 or AEGL-2, depending on local agreement.

**Table 7: Chemical Event Notification Levels**

<b>CENL</b>	<b>Definition</b>
Non-surety Emergency	Events are likely to occur or have occurred that may be perceived as a chemical surety emergency or that may be of general public interest but which pose no chemical surety hazard. This includes non-surety material emergencies.
Limited Area Emergency	Events are likely to occur or have occurred that involve agent release outside engineering controls or approved chemical storage facilities with chemical effects expected to be confined to the chemical limited area.
Post Only Emergency	Events are likely to occur or have occurred that involve agent release with chemical effects beyond the chemical limited area. Releases are not expected to present a danger to the off-post public.
Community Emergency	Events are likely to occur or have occurred that involve agent release with chemical effects beyond the installation boundary.

### **Alert and Notification**

Alert and notification are two separate steps: (1) attracting the attention of the public (alerting) and (2) providing specific, appropriate protective action instructions (notifying). Public education programs should stress this two-step process so that when alerted, people will listen for protective action instructions from designated notification systems.

### **Warning Point**

The term “off-post warning point” or “warning point,” as used in this section, refers to an off-post location where warnings and protective action recommendations (PARs) from the Army installation would be received. A 24-hour warning point, such as a 911 communications center, allows for person-to-person contact from the Army installation. Warning point staff must be able to either directly activate public alert and notification systems, or quickly contact those who can. There may be multiple warning points for multiple jurisdictions.

## **Concept of Operations**

Execution of warning and instruction functions following a CAI requires a well-planned system that is regularly tested and exercised. Specific standards and procedures are provided below. These outline standards for content and timing of initial warning messages, reliable and redundant systems to be used for emergency communications, information and timing standards for alerting and protective action instructions for the public, and measures to ensure that persons with special needs receive emergency alerts and instructions.

This section also addresses restrictions on release of information that may apply under certain circumstances, and notifications to higher Army headquarters and other response authorities.

## Standards and Procedures for Community Emergency

Perhaps the single most important function of CSEPP is to ensure that procedures and systems are in place to provide timely alert and notification to the population at risk in the event of a CAI that affects the on-post and off-post population. This function should be carefully planned to allow for prompt action when time is of the essence. To that end, the following standards and guidelines should be used in establishing alert and notification systems and procedures. These apply to any event known or expected to constitute a Community Emergency. (Local authorities should also be notified of other CENLs, particularly if on-post sirens are sounded or personnel are evacuated from the site. The timing and manner of such notifications should be as negotiated between the Army and local authorities, consistent with Army guidelines.)

Each CSEPP site should have the ability to activate and control alert and notification systems from two locations.

### Transmission of Warning and PARs for the IRZ to the Off-Post Warning Point

The Army installation accident reporting system should be designed to provide a warning and PAR to the off-post community warning points for the affected IRZ:

- Within five minutes at Blue Grass, and
- Within ten minutes at Pueblo.

The five or ten minute period begins when any individual who is responsible for identifying and reporting CAIs to the proper installation authority becomes aware of an event that might constitute a community emergency, and when that individual has the means to safely report it to the proper installation authority. The five or ten minute period ends when the Army installation has provided the following information to the appropriate off-post warning points:

1. The CENL;
2. The identity of the agent and the predominant wind direction;
3. The zones where the population is at risk; and
4. An appropriate initial PAR (evacuate, SIP, or no action) for each affected zone in the IRZ.

### Alert Signal and Protective Action Instructions for the IRZ

Systems and procedures should be in place to make a protective action decision (PAD) and provide an alert signal and appropriate protective action instruction to the population in the affected zones of the IRZ within eight minutes of receipt of the warning and PAR from the

installation. This eight-minute period begins when the installation's five- or ten-minute period ends (i.e., when the information in item 1 above has been transmitted and received).

### **Alert and Notification of the PAZ**

Alert and notification in the PAZ is equally important but slightly less time-critical. At all sites, in the event of a community emergency, the Army installation should provide PARs for the affected zones in the PAZ to the appropriate off-post warning points within 10 minutes after a responsible individual becomes aware of the event. Procedures for generating and providing PARs for the PAZ may be combined with those for the IRZ. Off-post officials should activate available systems and initiate planned measures to alert and notify the PAZ public within eight minutes of receipt of PARs for the PAZ from the installation.

### **Installation Activation of Off-post Systems**

For certain contingencies or situations it may be prudent to have plans for activation of off-post alert and notification systems by the Army installation. A 1994 Army Departmental Memorandum sets out conditions for Army direct notification and instruction to the public. Army direct notification and instruction may be requested by off-post authorities, and should be documented in an MOA that is included or incorporated by reference in both on-post and off-post plans.

### **Subsequent Notifications and Coordination**

Once initiated, procedures to alert and notify the public (for example, sirens, alert radios, and EAS) should be repeated, and updated if required, at regular intervals in each affected zone or area, at least every 12 minutes for the first hour and every 20 minutes thereafter, until the danger to the public is determined to be past in that zone or area. ("Area" refers to the possibility that areas smaller than an entire zone may be targeted in subsequent messages to the public.)

Guidance for plans and procedures to make timely initial alert and notification discussed above also apply to critical updates as conditions and circumstances change. For example, during the response to the chemical event, information may be obtained that changes the initial estimate of the amount of chemical agent released. That in turn may lead to changes in the recommended protective actions for certain zones and areas. Similarly, during response to a chemical event, another event may occur that places additional zones at risk. In such cases the time standards for warning, PAR, and alert and notification apply to the new PARs and new instructions to the public.

Also, alert and notification concerning when and how to end SIP in all zones where a population was instructed to take any initial protective action (evacuate or SIP) needs to be done in sufficient time to enable the population to end SIP to avoid fatalities to the maximum extent practicable.

### Notification to Installation of Off-Post Protective Actions

Off-post jurisdictions should notify the Army installation when a PAD is made and implemented by off-post authorities, regardless of whether the PAD followed the installation's PAR. Knowledge of actual off-post protective actions is essential for on-post situational awareness and response decisions.

### Sample Alert and Notification Timeline

This example text description and timeline (see Table 8) assume that the installation has five minutes to complete alert and notification of the appropriate off-post warning points (rather than ten minutes).

**Table 8: Sample Alert and Notification Timeline**

Minutes	Event
0	Start point: Individual who is responsible for identifying and reporting CAIs to the proper installation authority becomes aware of an event that might constitute a Community Emergency, and has the means to safely report it to the proper installation authority.
5	Initial verbal warning, information, and PAR provided to appropriate community warning points for IRZ. (Includes CENL, identity of agent, zones at risk, and initial PAR for each affected zone in the IRZ.)
10	Follow-up IRZ PAR written notification sent to appropriate community warning points.
10	Initial PAR provided verbally to community warning points for PAZ. (Zones at risk and initial PAR for each affected zone in the PAZ.)
13	Community has sounded warning sirens and provided initial PAD for affected IRZ zones via TARs and EAS.
15	Follow-up PAZ PAR written notification sent to community warning points.
18	Community has activated available systems and initiated planned measures to alert and notify affected PAZ public.
25	Community repeats sirens/TARs/EAS message for IRZ (and every 12 minutes thereafter for first hour, then every 20 minutes).

### Warning Point Communications and Protocol

The plan should describe procedures and equipment used for notifying the off-post warning points, including the following:

- Separate, dedicated primary and backup communication links between the Army installation EOC and off-post warning points;
- Daily testing of all dedicated links; and
- A verbal report of the event and associated information (e.g., CENL, agent, wind direction, and PARs for each affected zone) to off-post warning points as the primary notification, which is then confirmed by transmission of a hard copy of the information

via e-mail or fax. The plan should provide for the hard copy to be sent to the warning points within five minutes of the verbal notification. Automated electronic systems may also be used as the primary means of reporting the event and associated information to off-post warning points, provided that the systems are always on and are monitored continuously by trained operators at all off-post warning points, and that verbal confirmation of the report is accomplished immediately after the electronic notification.

## Format and Content of Notifications to the Public

Because of the importance of correct and timely protective actions and the limited warning time that may be available, instructional messages should be prerecorded or pre-scripted (i.e., written out ahead of time) to cover all plausible conditions and circumstances. Instructions should include a brief statement of the authority for the message, the nature of the threat, specific protective actions to be taken by the public, and the areas to which the instructions apply. Areas should be described in terms of familiar landmarks and boundaries. Instructional messages should refer to public education materials that have been distributed to the community, and the protective action instructions in the messages should be consistent with the content of the public education materials. However, instructional messages should not rely on the public's ability to find and read the previously distributed public education materials in an emergency.

EAS equipment may place a practical limit on message length. FCC regulations for EAS equipment require a capability to record and store messages of up to two minutes in length [see FCC regulations at 47 CFR 11.33(a)(3)(i)]. The equipment in use generally fulfills this requirement but does not exceed it. Pre-scripted instructional messages should stay within the length that can be accommodated by local EAS equipment.

## Measures for Special Populations

The alert and notification system should include the means to alert and notify special populations. Potential measures to consider include:

- Placement of emergency-activated communication devices (e.g., TARs, weather alert radios) in institutions that house special populations;
- Providing public notifications in languages other than English where there are significant non-English-speaking populations (emergency instructions should be translated into a foreign language if the State determines through survey or other means that one percent or more of the population at risk speaks that language but does not speak English); and
- Making mechanisms available to sensory-impaired individuals (e.g., vibration devices, flashing lights and teletype devices for the hearing impaired) to allow them to receive emergency instructions in a timely manner.

## Restrictions on Release of Information

Suspected criminal or terrorist activity, or loss of chemical agent or munitions, should not be reported to the public without approval by Army Headquarters. This restriction is not intended to prevent alert and notification of the public when there is a danger to the community, but only to delay transmission of information regarding the criminal or terrorist origins of the incident. In other words, if a chemical incident that poses a danger to the public is the result of criminal or terrorist action, the public should still be immediately notified and given protective action instructions, but information regarding the cause of the incident should not be distributed until the appropriate approval is obtained.

## Other Army Notifications

A CAI triggers numerous notification requirements under Federal law and Army regulations. Planners should be aware of these requirements and the Army's responsibilities under them. In particular Army procedures require notification to:

- The Local Emergency Planning Committee/State Emergency Response Commission (LEPC/SERC);
- The National Response Center (NRC);
- Army Operations Center (AOC) (per AR 50-6: *Chemical Surety*, Sec. 11-3 a.); and
- Public affairs offices at the U.S. Army Chemical Materials Activity (CMA), Army Materiel Command (AMC), and Army Headquarters (per AR 360-1: *Army Public Affairs Program*, Sec. 12-7).

## Infrastructure & Applications

The plan should include a description of the methods and systems used to alert and notify the public in the event of a CAI. The primary alert and notification system for the IRZ (including the Army installation) should consist of a network of outdoor warning devices covering all populated areas of the zone, along with indoor devices in each regularly occupied building. The outdoor warning devices should be 360-degree electronic sirens designed to provide an alert signal of at least 10 decibels above ambient noise levels. Outdoor warning devices should cover all frequently occupied areas, including not only residential areas but also commercial, industrial, and recreational areas. Indoor devices should have the capability to provide an alert signal and voice instructions when activated by local authorities. They must be able to respond to a CAI but may also include all-hazard alert warning capabilities. (Such devices may be referred to as TARs, adviser alert radios, or weather radios.) These indoor and outdoor devices should be supplemented with other mechanisms as appropriate, such as EAS broadcast messages, email,

commercial mobile-telephone alert system (CMAS), crawl messages on cable television, text-display highway signs, or other systems, to ensure the fullest possible coverage.

EAS procedures should be described, including:

- What radio and television broadcast stations and what cable operators will disseminate local emergency notifications; and
- How the EAS is activated and who (what positions) can activate it.

Alert and notification systems for the PAZ should include EAS and other means as needed to ensure that persons in the PAZ can receive alert and notification in a timely fashion to implement protective actions. Methods such as route alerting, that would likely take too long to implement in the IRZ, might be reasonable to use in the PAZ where distance from the source means more time is available to complete notification.

In all, the variety of alert and notification options has increased with rapidly advancing communications technology. In addition to adjusting to the impact of national systems such as IPAWS, affected agencies can choose from a growing array of A&N systems established to communicate with the public in a variety of environments and situations. Table 6 at the end of Chapter 9 identifies many of the options available to response agencies and briefly describes when each may be an appropriate option.

The [\*Integrated Public Alert and Warning System\*](#) (IPAWS) is intended to give public safety officials an integrated approach to alert and warn the public using the EAS, CMAS, National Oceanic and Atmospheric Administration (NOAA) Weather Radio, and other public alerting systems from a single interface. Using IPAWS may allow local officials to simplify the CSEPP A&N process while ensuring maximum coverage and consistency of messages across all media. Federal, State, territorial, tribal, and local alerting authorities may choose to use IPAWS and may also integrate local systems that use Common Alerting Protocol (CAP) standards with the IPAWS infrastructure.

For all implemented A&N systems, plans and procedures should provide for periodic testing, maintenance, and evaluation to support a continuing capability for alert and notification. All systems used for public alert and notification should receive preventive maintenance on a regular schedule and should be tested at least monthly. Siren systems should be periodically evaluated to ensure they are of sufficient volume to be heard above ambient noise levels.



# Chapter 12: Emergency Operations Centers

Objectives for this benchmark are:

- *Provide adequate facilities with the necessary space to support the operations of the ESFs for extended periods of time.*
- *Provide appropriate communications infrastructure and equipment to allow communications from higher and lower agencies.*
- *Provide a regular schedule for testing and maintaining the EOC equipment.*
- *Provide adequate supplies to support operations and adequate storage space for medicines, food, additional office supplies, and any other equipment needed.*
- *Provide sanitary facilities and, if required, sleeping accommodations adequate for half the total assigned staff at a time.*
- *Provide an emergency power source with an independent fuel supply adequate for operating all necessary equipment.*
- *Provide a potable water supply adequate to support the fully staffed EOC, which is not dependent on commercial power or susceptible to disruption by disaster conditions.*
- *Provide a food supply adequate to feed the full staff for several days, which may be delivered from outside and/or stocked within the EOC.*
- *Ensure effective physical security measures including access control and badging, to prevent unauthorized entry.*
- *Provide an enhanced single point grounding system and a rooftop lightning protection system to ensure that people and communications systems are protected from electrical surges.*

ESF # 5 & 7

Core Capabilities:  
Operational Coordination  
Situational Assessment

## Guidance

The following guidance is important to the capabilities outlined in the Emergency Operations Centers benchmark:

- NIOSH Guidance for Protecting Building Environments from Airborne Chemical, Biological, or Radiological Attacks
- American Society for Testing Materials E2668 – 10 Standard Guide for Emergency Operations Center (EOC) Development
- FEMA Emergency Operations Center (EOC) Grant Program: EOC Assessment Checklist (2002)
- FEMA 361– Design and Construction Guidance for Community Shelters
- FEMA 452 – A How-To Guide to Mitigate Potential Terrorist Attacks Against Buildings, January 2005
- IAEM Response Capability Multi-Agency Coordination (EOC Management) Guide (Draft, 2009)
- Motorola R56 – Standards and Guidelines for Communication Sites
- NFPA 90A – Standard for the Installation of Air Conditioning and Ventilating Systems
- NFPA 90B – Standard for the Installation of Warm Air Heating and Air Conditioning Systems
- NFPA 110 – Standard for Emergency and Standby Power Systems
- NFPA 220 – Standard on Types of Building Construction
- NFPA 1221 – Standard for the Installation, Maintenance, and Use of Emergency Services Communication Systems
- NFPA 1561 – Standard on Emergency Services Incident Management System
- NFPA 1600 – Standard on Disaster/Emergency Management and Business Continuity Programs
- NFPA 5000 – Building Construction and Safety Code
- [\*National Response Framework State and Local Partner Guides\*](#)
- Unified Facilities Criteria (UFC) 4-141-04 – Department of Defense Emergency Operations Center Planning and Design
- Unified Facilities Criteria (UFC) 4-010-01– Department of Defense Minimum Antiterrorism Standards for Buildings

## Training

The following training is important to the capabilities outlined in the Emergency Operations Centers benchmark:

- CSEPP Training Video: Emergency Planner’s Companion: Command and Control
- E-947– Emergency Operation Center (EOC) Incident Management Team (IMT) Interface
- G-191– Incident Command System/Emergency Operations Center Interface (ICS/EOC)
- IS-253a – Overview of FEMA’s Environmental and Historic Preservation Review
- IS-701a – NIMS Multiagency Coordination System (MACS) Course
- IS-775 – EOC Management and Operations

The EOC is the central command and control facility for response to a CAI. Such facilities must be adequately equipped to support communications between higher and lower agencies, allowing personnel to warn the general public, plan and execute required protective action strategies and response actions, and coordinate the reentry and recovery of areas affected by a CAI.

During such an event, the EOC provides direction and support to the emergency responders. Local installations, counties, and states must ensure their EOCs are established in accordance with NIMS guidance regarding EOC core functions, facilities, organization, and situational awareness, as well as with EOC guidance in CPG-101 regarding Communications (ESF#2) and Emergency Management Direction, Control, and Coordination (ESF#5). EOCs may be organized by major discipline, by ESF, by jurisdiction, or by some combination thereof. An ESF organization may be most appropriate because it will foster the request and delivery of Federal resources and is consistent with Federal EOC organization at the regional and national level.

## Concept of Operations

CSEPP plans should address communication and coordination between multiple jurisdictions using a multi-agency coordination system. The NIMS document, (*Component II, Communications and Information Management*), describes a number of mechanisms for multi-agency and multi-jurisdictional coordination, including use of EOCs, Unified Command (UC), Unified Area Command, and Multi-Agency Coordination Groups (MAC Groups). CSEPP jurisdictions should incorporate one or more of these mechanisms into plans and procedures, as agreed upon among the members of the local CSEPP Community.

Each CSEPP community jurisdiction should:

- Identify the officials authorized to activate the plan, activate the off-post EOC, represent the jurisdiction in the UC, and designate a chain of command for these activities.
- Ensure plans address coordination between multiple EOCs, separate EOCs, and inter-EOC communication into a MAC system.
- Ensure plans address the establishment of UC structure to aid in integrating Federal, State, and local jurisdiction leadership for effective allocation of resources and prioritization of response activities.

## Infrastructure

### Building Design

The EOC building design should center on a hardened core where the critical areas required for the EOC to function in an emergency will be located.

- Emergency Operations Room
- Auxiliary Communication Service (ACS), including Radio Amateur Civil Emergency Services /Amateur Radio Emergency Services (RACES/ARES)
- Emergency Management Warning Point
- Communication and Equipment Server Room
- Building System Rooms supporting the above areas

Where possible the following design guidelines should be considered and implemented:

- Unified Facilities Criteria (UFC) 4-141-04- DOD Emergency Operations Center Planning and Design
- UFC 4-010-01– DOD Minimum Antiterrorism Standards for Buildings
- FEMA 361– Design and Construction Guidance for Community Shelters
- FEMA 452 – A How-To Guide to Mitigate Potential Terrorist Attacks Against Buildings, January 2005.
- NIOSH Guidance for Protecting Building Environments from Airborne Chemical, Biological, or Radiological Attacks

## Building Systems

Building systems should be designed following the best practices, threat and vulnerability assessments, and management methodologies relevant to the potential threats for the proposed facility as outlined in the following resources:

- *FEMA 452 – A How-To Guide to Mitigate Potential Terrorist Attacks Against Buildings.*
- National Fire Protection Agency (NFPA) 1221 – Standard for Installation, Maintenance, and Use of Emergency Services Communications Systems, 2010.

The building systems are then designed to mitigate these threats to ensure that the facility is operational during a disaster. Key building system design criteria are not limited to, but should include, the following:

- Redundant heating, ventilation, and air conditioning (HVAC) for critical building areas with outside air shutoff.
- Provisions to continue operations when there is infrastructure damage; prudent practices include alternate power supplies, backup generators, alternate communication transmission systems, independent power systems for repeater sites, and backup information storage capabilities.
- Generator and fuel supply for critical building areas.

## Technology Systems

All technology systems needed to ensure a fully functioning EOC—including activation of alert and notification, hazard modeling and protective action decision-making, and tools to automate EOC business operations—must meet design guidelines provided in industry codes and standards, most notably NFPA 1221.

## Grounding

Due to the nature of the facilities being built and the communication system required, the facilities are required to have an enhanced single point ground system as well as a rooftop lightning protection system. This grounding system will ensure that the people and the communications equipment are protected from electrical surges occurring naturally from lightning or through the power company's electrical mains. An improperly grounded communications system can be completely destroyed with a single lightning strike. The grounding system should be designed to a 3 ohm resistance and follow *Motorola R56: Standards And Guidelines For Communication Sites.*

## Communications Towers

Since all EOCs rely heavily on communications, it is recommended that a communications tower be located close to the facility. This communications tower will be used for mounting communication antennas, microwave dishes, satellite dishes, and GPS equipment. The towers need to be designed and constructed to the proper standards for loading, wind and ice factors, and a host of other design criteria outlined in the Telecommunications Industry Association (TIA)-222, Revision G, *Structural Standards for Communication Towers*.

An external communications shelter is recommended with a tower or as a standalone building where the communications equipment can be terminated (thus reducing the possibility of power surges if the communications equipment or tower is hit by lightning). If a tower is not available, the equipment should be mounted on the shelter. The grounding of the shelter and communications equipment should follow the Motorola R56 standards for communication sites. If a tower and communication shelter is not possible and the equipment is mounted on the roof, proper lightning and grounding protection protocols must be followed.

## Applications

Since EOCs are the central command and control facilities responsible for carrying out the mission of emergency preparedness and emergency management functions, they are technology rich. Listed in Table 9 are different technologies that can be included to enhance the communications within and external of the EOC.

**Table 9: EOC Communication Technologies**

Application	Sub	Description
Audio Visual (AV)		Audio visual systems can be made up of multiple types of systems
	TV Display Walls	Large walls with multiple screen capability
	LED Projectors	Small or large wall displays
	Smart Boards	Interactive display boards
	TV	Single displays
	Video Teleconference (VTC)	Supports remote video meetings

Application	Sub	Description
	Video Matrix	Format and provide consolidated control of the video ins and outs for the AV systems
	Audio Systems	Support audio need of the video system and paging
Telephone		Phone system supports internal and external phone communications
	911 Phone system	Support emergency call taking, act as warning point for the public
	Administrative phone system	Main phone system for the EOC, act as warning point and general communications
	Direct Phone lines	Phone line circuits connecting directly between facilities
	Satellite Phone	Redundant phone device that does not rely on land based infrastructure for communication between phones
Radio		Radio communications with emergency and support personnel
	ACS	Amateur Radio system act as backup for main radio systems can consist of UHV, VHF and HF radio systems
	Radio systems	Main radio system for communications with first responders, emergency and support personnel.
Time Systems		GPS time system for accurate time. Required by 911 systems
Furniture		Furniture for different areas
	Radio Dispatch/911	Custom Consoles to allow for ADA requirements and allow system to lift to adjust to the personnel utilizing
	EOC/Conference rooms	Furniture designed to meet the needs of the EOC design including built in power and network connections for easy

## Construction Requirements

There are specific requirements for using Federal grants for any construction project, including compliance with all applicable Federal, State, and local permits as well as environmental planning and historical preservation clearances. As provided in 44 CFR part 10, FEMA is required to consider the potential impacts to the human and natural environment of projects proposed for FEMA cooperative agreement funding. Recipients of CSEPP funds shall provide all relevant information to FEMA to ensure compliance with applicable Federal Environmental and Historic Preservation (EHP) requirements. Any project with the potential to impact natural or

biological resources or historic properties cannot be initiated until FEMA has completed the required EHP review. Information on EHP compliance may be found at <http://www.fema.gov>.

Construction projects must be identified, justified, and approved during the LCCE process. The current CSEPP CA Guidance should be consulted and followed prior to starting any construction project. FEMA HQ and Regional personnel are available to assist with these requirements.



# Chapter 13: Public Outreach and Education

*Objectives for this benchmark are:*

- *Develop and implement a Joint Information System (JIS) that will function as an information-sharing and mutual support network for public affairs officers.*
- *Develop a Joint Information Center (JIC) plan that will help participating jurisdictions to coordinate and disseminate rapid and accurate information during an emergency from a central facility to media outlets and the public.*
- *Develop media products and messages to improve the public's knowledge and acceptance of protective actions.*

ESF #15

Core Capabilities: Public Information and Warning

Achieving an informed public requires research to gain an understanding of the public's current levels of protective action knowledge. Based on that research, a public education program can be designed and implemented to increase the public's knowledge of emergency protective actions and the relative risks associated with an event. In addition, an effective outreach program should:

- Maintain residents' trust in emergency management;
- Foster two-way communication between CSEPP and program stakeholders; and
- Communicate to the community the risks posed by the stockpile.

The public education program should be periodically evaluated over its life to determine whether it is achieving these goals and to provide a basis for improvements to public education efforts.

## Guidance

The following guidance is important to the capabilities outlined in the Public Outreach and Education benchmark:

- [CSEPP Public Affairs Program Guidance Compendium Workbook](#)

Senior elected officials, emergency managers, and on-post military commanders play an important role in the development and implementation of CSEPP public education and emergency public information programs. Without senior management collaboration, there is a risk of communicating mixed messages to the public and causing confusion about which emergency protective actions are appropriate. This chapter describes the mechanisms for developing, coordinating, and distributing information to the public.

## Tools and Processes

The CSEPP Public Affairs IPT has developed a step-by-step process for communities to develop public outreach campaigns. The process begins with identifying knowledge gaps, setting goals and metrics for the outreach, and evaluating and implementing outreach strategies and follow-up studies to measure campaign success. Detailed guidance on implementing an outreach campaign is located in the [CSEPP Public Affairs Program Guidance Compendium Workbook](#). Public education is more effective when it involves two-way communication. The public’s concerns must be acknowledged and addressed by both the Army installation and off-post emergency management officials. Open communication between the on- and off-post communities fosters trust and credibility. Technical jargon and acronyms should not be used to convey the intended messages.



**Figure 8: Each community’s public affairs team should develop an outreach strategy that identifies target audiences, their information needs, and the most effective methods of reaching them.**

## Training

The following training is important to the capabilities outlined in the Public Outreach and Education benchmark:”

- [CSEPP Training Video: Communicating Public Information in Emergencies](#)
- CSEPP Advanced Information Technology Course
- [IS-250 ESF #15 External Affairs](#)
- [G-290 Basic Public Information Officer \(PIO\)](#)
- [E-105 Public Information and Warning](#)
- [E-388 Advanced Public Information Officers](#)

CSEPP public education campaigns should enlist the support and aid of trusted sources of information in the community, including public officials and the news media. Participation and support of community officials is essential to any preparedness program. The news media are important channels for communication and outreach in any preparedness program. Because of the large audience the media can instantaneously reach, the CSEPP community should anticipate the needs of the news media, especially local outlets, and accommodate their requests whenever possible.

The Public Affairs IPT page on the CSEPP Portal provides a repository of historical and current documents related to public outreach and education, public information, and other topics.

## Tailoring a Program to a Community’s Needs

CSEPP public education programs should be tailored to each community based on research that identifies the community’s needs. For example, diverse ethnic and socioeconomic groups may require a variety of approaches. Education programs should also follow existing Federal guidelines on providing information to these groups. Public education programs may include:

- Printed public information materials such as calendars, telephone directory inserts, and brochures distributed to residents and special facilities such as schools, nursing homes, and hospitals (with specific information such as relocation points, special facility plans, and items to take to a mass care center);
- Posters and displays in areas where transient populations pass;
- Presentations before civic and fraternal organizations and other formal and informal groups;
- Public meetings;

- Programs designed for specific audiences, including school children, local media, and community leaders;
- Paid advertising to disseminate specific outreach messages; and
- Social media.

## Emergency Public Information

The principal objective of an emergency public information program is to minimize fatalities, injuries, and property damage by ensuring appropriate instructions are distributed to the public in a timely manner during a CAI. Research and case studies show that accurate, consistent, and timely information calms anxieties and reduces potentially problematic public reactions such as spontaneous evacuation. Before an emergency occurs, communities should consider what information will be needed by the news media and public, and then develop a strategy for gathering, coordinating, and disseminating that information quickly and accurately.

In the event of a CAI, emergency public information should be disseminated in stages. The initial stage should focus on immediate, urgent protective activities such as shelter-in-place or evacuation. As off-post response facilities (e.g., shelters) become operational, emergency public information should center on response. Response will evolve into recovery. Each new phase will likely have a different focus and involve different information. Similarly, specific population groups will have varied information needs. For example, non-English speakers and those with visual, hearing, or speech impairments have special requirements. The emergency public information program should include provisions for meeting the unique needs of special population groups.

Initial, urgent action messages are distributed over dedicated systems such as EAS and TARs, and social media is increasingly used to disseminate and share emergency public information. However, over the course of an emergency and its aftermath, the news media will be the public's primary source of information, relying on both official and non-official sources. Ensuring the news media receives accurate, consistent and timely official information from the outset requires careful planning and considerable advance preparation. It is important to build and maintain a strong working relationship with the news media. This relationship should include a clear commitment that government representatives will be immediately available to provide information over the course of an emergency.

In order to reach as many members of the public as possible, public information staff should, in addition to working with the news media, use other methods of information dissemination such as blogs, web sites, community bulletin boards, email lists, text messages, and social media sites.

Given the many demands that occur in the immediate aftermath of an emergency event, there will not be time to develop a comprehensive emergency information program after an incident occurs. In order to ensure a coordinated process, a JIS and JIC are required.

## Joint Information System

A JIS is a network that allows multiple organizations involved in an emergency response to communicate and coordinate with one another regarding information to be provided to the public and news media. The elements of a JIS must be put into place before an emergency occurs. This includes the plans, protocols, and structures used to provide information during incident operations. It encompasses all public information operations related to an incident, including those performed at the Federal, State, local, and private organization levels.

It is important that the public information presented during an emergency be clear, accurate, and consistent. Considering the number of agencies and jurisdictions that are likely to be part of a response to a CAI, these qualities can be ensured only through careful coordination and planning among the agencies and jurisdictions involved. In the pre-emergency phase, each agency's or jurisdiction's procedures for disseminating public information should be coordinated and made compatible with the strategies developed by all other agencies and jurisdictions that may be affected by a chemical agent event.

## Joint Information Center

A JIC is a physical location where public information specialists from the Army and Federal, State, and local jurisdictions, as well as volunteer and nongovernmental agencies, meet to coordinate the release of emergency public information. An effective JIC will gather, verify, produce, and disseminate information using all available means, and should be large enough to accommodate expected staff and news media. JIC staff should monitor public phone calls and analyze news and social media coverage of the emergency, with a rapid response team addressing identified gaps in information, misinformation, or unconfirmed information (i.e., rumors or speculation) that may detrimentally affect the response and recovery effort. As with the JIS, senior management buy-in of the concepts of communicating through a JIC is imperative for the center to work effectively.

Identified JIS members should train and exercise the JIC structure as often as possible, including cross-training in the specific JIC functions. All CSEPP exercises should include a proactive public information program. The JIC should also be activated in emergencies whenever feasible so that even in limited responses it becomes a familiar tool for Public Information Officers (PIOs), emergency responders, and the news media. This will allow for any glitches in procedures and protocols to be identified and fixed. Pre-event planning should also address surge situations

where staffing, facilities, equipment, and other resources may be inadequate to meet the needs of the news media or public.

Key programmatic elements of a JIC include:

- **Provision for the facility.** Designate one or more JIC facilities near the installation, but preferably outside the IRZ. Typically arrangements are made to secure use of a suitable existing facility in the event of a CAI. An alternate location should be provided in case the primary location cannot be used. A mobile JIC equipment package could serve to fulfill this role, or be used to augment a primary JIC or another CSEPP site's JIC or mobile JIC.
- **Coordinated planning.** JIC staffing, equipment, and supplies should be provided for in emergency plans. Planning for the JIC should anticipate that Army, Federal, and State PIOs may be unable to report to the JIC, or that additional JICs may be established by other response organizations. For complex incidents spanning a wide geographic area, multiple JICs may be necessary. In particular, the Army installation may need to rely on a separate media center.
- **Communication systems.** Equipment and systems should be provided for communications to support the JIC. Adequate phone, radio, computer, and Internet linkage among all JICs and EOCs is critical.
- **Training and exercises.** The JIC structure should be exercised as often as possible, and the JIC concept should be explained to local news media representatives.

Plans for a virtual JIC that link all participants through technological means will offer greater flexibility and expanded resources for 24-hour staffing. This in turn will reduce the need for volunteers in most CSEPP JICs and allow for CSEPP-trained PIOs in other jurisdictions to assist during any CAI.

## Remediation and Recovery

Once the immediate response to an emergency has been completed, a longer-term remediation and recovery phase will begin. This phase, which can last for days, weeks, or months, is characterized by information regarding residual hazards, protective actions, care and services available to the public, cleanup, remediation, and claims procedures.

Planning for the remediation and recovery phase should provide for a transition from the emergency response to a longer-term recovery mode. A key focus will be the development of a staffing plan that covers a potentially lengthy JIC activation and anticipates possible public affairs resources and support from the State and/or Federal government.

During this period, the remediation and recovery plan should support CSEPP public information staff in:

- Gathering information and coordinating with public information staff of all organizations involved in the recovery effort;
- Obtaining advice from experts in recovery fields such as environmental remediation, claims, and social services; and
- Disseminating recovery information to the public and news media via news releases, interviews, news conferences and briefings, and responses to traditional media, social media and public inquiries.

## Collaboration and Coordination

As in other CSEPP program areas, public affairs employs the “whole community” concept of collaboration and coordination. Successful implementation of a JIS and adequate staffing of a JIC require ongoing coordination by public information professionals in the CSEPP communities. To facilitate coordination, CSEPP PIOs should employ an all-hazards approach to emergency readiness and response to ensure each community has a network in place for any emergency and can work together toward an end goal of a better-prepared public. This methodology will also benefit the community when the CSEPP mission is complete because a solid working relationship among public affairs staff will remain. Agencies such as hospitals, schools, utilities, higher education institutions, response agencies, local government entities, and chambers of commerce are all partners during a community emergency. PIOs from each of these agencies should attempt to meet regularly as a group. Annual activation of the JIC during a CSEPP exercise allows the group to practice its emergency message coordination with qualified individuals on hand to evaluate the response.

In addition to building all-hazards partnerships, CSEPP PIOs benefit from developing working relationships with other public affairs practitioners who are directly involved with the stockpiles. Federal agencies such as FEMA, CMA, and ACWA (and its Outreach offices) employ subject-matter experts who will have a critical messaging role before, during, and after any chemical event. Familiarization with each agency’s roles and responsibilities and pre-planning of crisis communication is critical to effectively coordinating public information. In an effort to ensure there is ongoing networking among these agencies, and between the two stockpile states, the information officers have identified a continuing need for a Public Affairs IPT. The Public Affairs IPT has a responsibility to develop a work plan, mentor incoming CSEPP PIOs/Public Affairs Officers (PAOs), communicate public affairs efforts throughout the program, and share best practices and lessons learned with each other.

This collaboration and coordination can occur in a number of ways. Public information professionals can support each other *in person* by coordinating outreach activities and supporting

emergency public information efforts; *over the phone* by mentoring each other and conference calling on specific issues; and *via the Internet* by sharing lessons learned, new products, and situation monitoring as needed.

Finally, when partnerships are pursued, it is vital for the public information team to consider members of the news media among those partners. The professional relationship between a PIO and local print, television, and radio reporters is vital because each is a direct link between CSEPP and the public. To ensure a positive relationship, a PIO must be available, honest, and responsive to inquiries when working with the news media. Maintaining an open line of communication with this specific partner will facilitate conversation and should encourage reporters to consider the PIO a valuable asset when information relevant to our mission is requested by the public, or when controversial issues emerge. It also increases the likelihood that overall coverage of stockpile storage and demilitarization activities will be more accurate as reporters become familiar with and knowledgeable about CSEPP.

## Social Media

Social media allows PIOs to share information on public education activities, daily public information operations, and emergency incidents. There are several tools to choose from that fall into the social media realm including, but not limited to, Twitter, Facebook, blogs, and websites. These tools, and many others, enable PIOs to reach a large audience quickly with accurate, and in some cases, lifesaving information.

The benefits of using and supporting social media as a tool for information sharing include the ability to access social media tools from mobile sites, making it a low-cost, accessible option for a wide variety of audiences. This allows PIOs to share information and messaging quickly with a large number of people and through a variety of social media tools at the same time. Public information officers use social media as a situational awareness tool to monitor new events in the community and the reaction to those events. Social media allows PIOs to evaluate how current messaging is being received and acted upon in the community. This also allows for engagement with members of the community, like residents, business owners, and community groups. The PIO is able to direct and manage the messaging about an activity or event directly with the community and with all levels of traditional news media (local, State, and National). This tool allows PIOs to manage rumors and misinformation quickly and efficiently so the community has accurate information with which to make the safest choices for themselves. It is important that organizations establish a social media role in their community before a disaster or emergency occurs in order to be a trusted source of information.

Each agency should develop a formal policy on the social media tools they will use, specifying how they are to be used, for what purpose, and the staff who will have access to them. Social

media should be included in the communication plan as a method for sharing emergency information, daily operations, and public education messaging.

There are challenges for implementing and using social media as part of a communication plan. Most importantly, the effective use of social media requires the strong support of management and incident command. Social media tools—and the PIOs responsible for administering them—must be used and trusted in order to have an impact during the communications process. Identifying staff to monitor and post information can also be a challenge. Social media participation involves both sending information out and having staff to monitor and respond to messaging coming into the organization. Since social media will continue to evolve to meet the needs and demands of the community, there must be a commitment to ongoing staff training and involvement with the tools available.

## Professional Development

Regular training for CSEPP PIOs and PAOs is a critical element of professional development and may take many forms—such as formal classes, field deployments, and meeting attendance and participation. Training helps public affairs staff in CSEPP communities expand their expertise and learn new ideas and methods for maintaining an effective all-hazards public information program. CSEPP public affairs staff should strive for a comprehensive training approach that integrates the entire community including, when possible, members of local, statewide, and national public information groups. By involving all relevant partners in training opportunities, coordination will be improved, familiarity with emergency response procedures increased, and available resources maximized.

CSEPP public affairs professionals have access to a wide range of training—both directly through the program, and as members of the larger public affairs networks and associations that exist in their states and at the national level. It is important that program managers support, to the maximum extent possible, the ongoing professional development of PIOs and PAOs and recognize it as a primary job responsibility. Training is an investment that must be made during periods of routine operations in order to yield dividends when an incident occurs. There is additional training available through CSEPP that targets decision makers, program managers, elected officials and technical experts, emphasizing their unique roles in communicating before, during, and after an emergency.

To identify what opportunities exist for professional development in the area of public information, both CSEPP-specific and other courses presented at the local, State or national level should be considered. For off-post jurisdictions, the PIO and/or training officers for the primary IRZ county, the State, and the FEMA Region will be the best sources of information about what is available and how it can be accessed. For the installation, the Army chemical stockpile PAO should be consulted. Training requests should be coordinated through the appropriate on- or off-

post points of contact, who in turn should work with counterparts in the FEMA or Army Program Office. Courses sponsored directly by CSEPP are generally funded by headquarters and presented at no cost to local participants. While the administrative requirements for non-CSEPP training will vary, those courses are also often available at little or no cost.

CSEPP-specific public affairs training is generally provided through contractor-delivered classes and support services. (A listing of the courses offered can be found in the [\*CSEPP Public Affairs Program Guidance Compendium Workbook\*](#).) Additional professional development regularly occurs through the CSEPP Public Affairs IPT, where lessons learned and best practices are routinely exchanged. The regular attendance and participation of all CSEPP staff who have either full- or part-time public information responsibilities is strongly encouraged at IPT meetings. The IPT is also responsible for development and distribution of the *RSA Notebook*, through which public affairs-related news is shared, including a calendar of scheduled training. Likewise, the CSEPP Annual Meeting is an ongoing forum through which significant professional development occurs.

Beyond CSEPP, and often under the purview of local, statewide or regional public information groups and professional associations, additional training is frequently made available. CSEPP PIOs and PAOs should be actively engaged with their fellow practitioners, with the support of their managers. At the national level, FEMA offers a broad array of courses, both online and in the classroom. These courses are aimed at people for whom public information is a primary responsibility (as well as others who communicate with the public and news media on a more limited basis). The website for FEMA's Emergency Management Institute (EMI) has information available about the various course offerings, which are available at no cost to participants (provided that eligibility criteria are met). The EMI training program is designed to build upon itself, so that new PIOs can gradually work their way through increasingly advanced classes and course material. The Army has similarly comprehensive training available for PAOs as part of its Defense Information School.



## Chapter 14: Protective Action

*Objectives for this benchmark are:*

- *Outlining procedures for the annual review and adjustment of guidelines for potential protective actions for each chemical event, emergency notification level, and accident category on a zone-by-zone basis.*
- *Proof that it is derived from scientifically sound risk assessment methodology for blister and nerve agents, such as the Acute Exposure Guideline Levels (AEGs).*
- *Describing the coordinated local decision-making process for selecting and implementing protective actions that can be rapidly implemented on a 24-hour basis.*
- *Addressing the selection and implementation of access and traffic control points.*
- *Addressing the selection and implementation of protective measures for access and functional needs populations.*
- *Addressing criteria for selecting an incident-specific combination of evacuation and/or in-place sheltering as public protection measures.*
- *Identifying procedures for the safety and protection of emergency workers.*
- *Identifying measures to address potential impacts on domesticated animals, crops, and water supplies.*

ESFs #4, 6, 10, 11, 13

Core Capabilities:  
Environmental Response/  
Health and Safety  
Mass Care Services

## Guidance

The following guidance is important to the capabilities outlined in the Protective Actions benchmark:

- FEMA, Accommodating Individuals with Disabilities in the Provision of Disaster Mass Care, Housing, & Human Services Reference Guide, accessed at <http://www.fema.gov/accommodating-individuals-disabilities-provision-disaster-mass-care-housing-human-services>.
- FEMA, Guidance on Planning for Integration of Functional Needs Support Services in General Population Shelters (November 2010), accessed at [www.fema.gov/pdf/about/odc/fnss\\_guidance.pdf](http://www.fema.gov/pdf/about/odc/fnss_guidance.pdf).
- U.S. Dept. of Justice, ADA Best Practices Tool Kit for State and Local Governments, Chapter 7, Addendum 2: The ADA and Emergency Shelters: Access for All in Emergencies and Disasters (2007).
- U.S. Dept. of Justice, ADA Best Practices Tool Kit for State and Local Governments, Chapter 7, Addendum 3: ADA Checklist for Emergency Shelters (2007).
- [\*OSHA HAZWOPER Standard at 29 CFR §1910.120\*](#)
- [\*OSHA Respiratory Protection Standard at 29 CFR §1910.134\*](#)
- [\*EPA HAZWOPER Regulations at 40 CFR 311\*](#)
- [\*HHS/NIOSH Guidance on Emergency Responder Personal Protective Equipment \(PPE\) for response to Chemical, Biological, Radiological, and Nuclear \(CBRN\) Terrorism Incidents\*](#)
- [\*FEMA Guidance for Individuals with Access and Functional Needs\*](#)
- [\*FEMA Guidance for Pet Owners\*](#)
- [\*FEMA Disaster Assistance Policy on Pet Evacuations and Sheltering 9523.19\*](#) (October 24, 2007)
- [\*Pets Evacuation and Transportation Act \(PETS Act\), P.L. 109-308\*](#)
- [\*American Red Cross Pet Safety\*](#)
- [\*CSEPP Protective Action Toolkit\*](#)

The primary goal of CSEPP is to establish an ability to protect the public health and safety in accordance with the Congressional “maximum protection” mandate. The ability to rapidly implement effective protective actions for the public, on-post populations and emergency responders is the over-arching goal of the entire program and the benchmark that all other benchmark areas support.

A CAI triggers a sequence of actions both on the Army installation and in the surrounding communities. When protective actions are necessary to protect health and safety, installation authorities should provide on-post warnings and recommend actions to protect individuals located

## Training

The following training is important to the capabilities outlined in the Protective Actions benchmark:

- [CSEPP Training Video: Operations Level Training: A Refresher for Responders](#)
- [CSEPP Training Video: Animals in Emergencies for Planners](#)
- [CSEPP Training Video: Business Shelter-In-Place/Residential Shelter-In-Place](#)
- [CSEPP Training Video: Evacuation Planning](#)
- [CSEPP Training Video: Emergency Planning for People with Access and Functional Needs](#)
- [CSEPP Training Video: Comprehensive Planning for Technological Emergencies](#)

on the installation, and also notify off-post warning points and provide a protective action recommendation (PAR) for any affected off-post zones. Off-post authorities are responsible for making a protective action decision (PAD) and alerting and notifying the public in affected zones; however, some of these actions can be delegated to the Army installation in accordance with local agreements. The process of developing and implementing protective actions should be carefully planned between the installation and off-post authorities so that they can be executed quickly and effectively in an emergency.

This chapter describes protective action options for CSEPP, including evacuation and shelter-in-place (SIP), and planning considerations for choosing and implementing chemical emergency protective actions. It addresses the following topics:

- Principles of Protective Action
- Protective Action Decision Making
- Protective Action Options
- Protective Action Implementation
- Access and Functional Needs Populations
- Reception and Care of Evacuees
- Emergency Worker Protection

## Principles of Protective Action

Protective actions are activities that a population at risk engages in to obtain the best outcome in the event of a chemical emergency at Army chemical storage/disposal installations. The principal desired outcome is the avoidance of fatalities to the maximum extent possible for the conditions

and circumstances of the emergency, due to timely and appropriate actions taken by Army and off-post officials, emergency workers, and the population at risk. Another desirable outcome is minimization of harm to property and the environment.

Protective actions will provide the best outcomes if they are derived from a balanced protective action strategy, appropriate to the unique nature of the hazard and risk at each site, which is developed jointly between the Army installation and community officials. This strategy should be embedded in plans, agreements, training, exercises, public education, and emergency response actions throughout each CSEPP community.

A balanced protective action strategy consists of an appropriate mix of immediate evacuation and temporary SIP, with appropriate follow-on actions to end SIP at the best time and in the best way to minimize fatalities.

Initial recommendations, decisions, and directions to take a specific protective action in particular zones should be based on previously agreed upon protocols and chemical hazard modeling and related calculations. While these initial recommendations, decisions, and directions might be based on incomplete information, the alternative of waiting for complete information (i.e., definitive monitoring or more sophisticated modeling results) will almost certainly jeopardize a good outcome. Subsequent recommendations, decisions, and directions to modify initial protective actions (e.g., evacuate a larger area or end SIP in a specific area) must be developed and promulgated as thoughtfully and quickly as initial protective actions. A balanced protective action strategy also assumes that some percentage of a population at risk may act contrary to direction, and that people with access and functional needs might need special consideration. These concerns should be addressed in plans and agreements, and taken into account as the response evolves.

## Protective Action Decision Making

### Responsibility for Decision Making

When a chemical emergency occurs, PADs must be made for individuals on the Army installation and within the affected areas of the off-post community. The Installation Commander has the responsibility and authority for initial chemical event response on-post; for the protection of on-post personnel; and for mitigation of the event's consequences. The Installation Commander is also responsible for providing appropriate PARs to the off-post community. PARs must be situation-specific and must be updated as the situation warrants. PARs should include recommendations to end SIP at the appropriate time.

State and local officials are responsible for making PADs for the off-post community. Off-post officials may choose to delegate authority for initial off-post PADs to Army installation officials

in situations where a quick decision is needed to save lives. Any such delegations should be carefully developed and fully documented.

### Time Available for Decisions

During any emergency, quick response is of the essence. A reasonable PAR or PAD that is issued quickly, based on the pre-approved criteria of the community's Protective Action Strategy and current community conditions, is better than a "perfect" PAR/PAD that is issued too late to be effective. Any delay in making PADs can occur at the expense of fatalities in areas closest to the storage site. Detailed guidance on the timing of making PADs and alert and notification may be found in Chapter 11: Alert and Notification.

### Coordination of Decision Making

Because of the limited time available to make this complex decision during an emergency, it is important that the process is carefully planned. It should be anticipated that there will be very little time for staff activation, consideration, discussion, coordination, or confirmation of circumstances before a decision must be made and implemented. Plans and procedures should document the method for quickly determining the preferred protective actions, and the areas to which they apply, based on information that is expected to be available before and immediately after the event.

The decision process should be documented in an MOU that includes all relevant organizations. The MOU should indicate who will make PADs and how they will be communicated to the public, including the circumstances, if any, under which the Army installation will initiate activation of public alert and notification systems (see Chapter 11: Alert and Notification).

To prepare for the possibility of a chemical emergency, at least once per workday the Army installation should develop a hazard estimate based on the maximum credible event (MCE) for storage operations, or emergency response planning scenario (ERPS) for demilitarization operations for that day's planned operations. The MCE/ERPS, along with real-time meteorological data, should be used with the Army's approved hazard models to develop a provisional PAR. The MCE/ERPS may change during the day, for example, if there is a change in planned operations or a significant change in meteorological conditions. In that case an updated hazard assessment and provisional PAR should be generated and transmitted to off-post authorities.

After a provisional PAR has been provided, if an actual chemical event occurs, a new PAR should be rapidly provided based on updated information. The new PAR will likely differ from the provisional PAR since the updated source term, location, and meteorological information may not match the information on which the provisional PAR was based.

It is recommended that the Army installation and off-post authorities develop an MOU that describes when and how the installation provides daily work plan information, including the MCE/ERPS, to the appropriate points of contact (POCs) off-post. Similarly, off-post authorities should provide daily information to the installation EOC regarding road closures or other conditions that might affect emergency response for the installation.

### Determining the Appropriate Protective Action

A balanced protective actions strategy that includes provision for evacuation and SIP should be incorporated into on-post and off-post CSEPP plans. Detailed guidance for developing a balanced protective action strategy can be found in the *Report of the Shelter-in-Place Work Group* and the *Shelter-in-Place Protective Action Guidebook*. Hazard modeling using approved Army model(s) should be used to estimate the hazard for PAD-making purposes. Additional information on protective action options and implementation of protective actions follows this section.

When a chemical event occurs, preferred protective actions for each affected zone should be chosen based on the following factors, as applicable:

- The identity of the chemical agent involved;
- Projected areas affected by each AEGL threshold;
- The time that the hazard is projected to reach each affected zone;
- How long it will take to implement protective actions, including evacuation time estimates, and time needed to implement SIP, as applicable;
- The degree of protection offered by local housing stock and other populated structures; and
- The current traffic situation (e.g., inclement weather or road closures that might impede evacuation).

Any SIP PAD must always include provision for terminating SIP to minimize exposure. In essence, SIP is a two-part decision that is not complete until the “end SIP” recommendation is made, and an end SIP instruction is broadcast.

### Zone Based Protective Action Strategies

The most effective and appropriate protective action may vary depending upon the distance from the hazard and the time required for a hazard to arrive. For example, evacuation may not be feasible for areas where the chemical plume arrives before a significant number of people at risk are able to evacuate the zone. Each CSEPP plan should sub-divide the IRZ and PAZ into smaller sub-zones or response areas to permit more granular protective action decision making. Army and off-post officials should evaluate the relative effectiveness of all available protective action options (detailed in the next section) to determine whether a single protective action is appropriate at all times for certain sub-zones or whether the optimum protective action for a sub-zone will vary depending upon the circumstances of the release and prevailing meteorological

conditions. The full range of protective actions appropriate for each sub-zone should be documented in plans and procedures and used in conjunction with the Army hazard assessment model at the time of an actual emergency to determine zone-by-zone protection strategies. Zone-based decision making for protective action strategies should be applied during both Response and Recovery phases of a chemical emergency.

The zone basis for CSEPP Emergency Planning is described in detail in Chapter 6: Coordinated Plans.

## Protective Action Options

There are three basic protective actions in a chemical emergency: evacuation, SIP, and no action. Any or all of these actions may be appropriate for different areas depending on factors such as time available before toxic plume arrival, protection afforded by shelters, and evacuation time estimates.

Important considerations for these options include, but are not limited to:

- The threat level at which to warn the public.
- Who needs to be warned.
- How they are to be warned.
- What specific actions are to be taken.
- Whether to issue a precautionary message.
- How multiple protective actions are communicated to different audiences.
- How updated protective actions are communicated.

### Evacuation

Evacuation consists of temporarily leaving an area of actual or potential hazard for a safe area. It is the most effective of all protective actions, provided it is completed before the arrival of the toxic plume. Evacuation may be precautionary or responsive in nature. A precautionary evacuation is one that is based on risk of a toxic release, but that takes place before any release has occurred. A responsive evacuation is one that occurs after a release. Both types entail similar planning tasks: estimating the number of potential evacuees, with particular emphasis on people with access and functional needs; identifying the most appropriate evacuation routes; designating needed traffic control; estimating the time needed for evacuation; and anticipating potential problems.

Access control points (ACPs) and traffic control points (TCPs) should be designated ahead of time based on the pre-designated EPZs. However, instructions to evacuate should not be delayed

pending the establishment of ACPs and TCPs. Staffing and equipment to set up and maintain the ACPs and TCPs should be identified in the plans and procedures.

### Shelter-in-Place

Shelter-in-place is accomplished by isolating the individual from exposure to a hazard. Shelters may be congregate (for many people) or individualized (a home). Shelters may be existing structures, with or without upgraded protective measures, or facilities specifically designed to provide shelter from toxic chemicals. In CSEPP there are four types of SIP: normal, expedient, enhanced, and pressurized.

- **Normal SIP** involves taking cover in a building, closing all doors and windows, and turning off ventilation systems. Effectiveness is improved by going into an interior room. The shelter should be opened up or abandoned after the toxic plume has passed.
- **Expedient SIP** is similar to normal SIP except that, after going into the room selected as a shelter at the time of an emergency, the inhabitants take measures to reduce the rate at which air or chemical agent enters the room. Such measures would include taping around doors and windows and covering vents and electrical outlets with plastic. Effectiveness is improved if an interior room is selected as a shelter. The shelter should be opened up or abandoned after the plume has passed.
- **Enhanced SIP** is similar to normal SIP except that it involves taking shelter in a structure to which weatherization techniques have been applied before the emergency to permanently reduce the rate at which air or chemical agent seeps into the structure. Effectiveness is improved by going into an interior room. The shelter should be opened up or abandoned after the toxic plume has passed.
- **Pressurized SIP** is similar to normal SIP except the infiltration of contaminated air is effectively prevented by drawing outside air into the shelter through a filter that removes chemical agent. This filtered air creates a positive pressure in the shelter so that clean air is leaking out instead of contaminated air leaking in.

The duration of protection offered by unpressurized shelters is limited. Because such shelters cannot be made completely air tight, they will eventually be infiltrated by chemical agent. People in the shelter will be exposed to gradually increasing concentrations of agent, and exposure will continue even after the chemical agent plume has passed outside of the shelter. Consequently, the protection offered by unpressurized shelter depends on exiting the shelter at the appropriate time; the dose-reduction advantage of SIP can be minimized or lost if the shelter is not exited at the right time. The Army has responsibility to notify the off-post communities as to optimal times to exit these shelters.

### Standby / Stay at Home

Some CSEPP communities include a “standby” or “stay-at-home” recommendation among their protective action strategies. A “stay-at-home” option would be employed when there is an event

on-post that might create public concern, but the expectation of hazard off-post is not sufficient to warrant evacuation or sheltering in place. The public would be requested to stay away from the depot, limit travel, limit telephone calls, and wait for more information.

A “standby” instruction to persons in certain protective action zones to remain where they are and monitor emergency information may be issued to allow directly affected zones to evacuate quickly. The goals of a standby or stay-at-home strategy are to keep the public informed and to facilitate response by keeping local roads clear for emergency vehicles and evacuation traffic. Like any protective action option, if it is to be used in an emergency, the standby or stay-at-home option should be addressed in plans, training, and public education materials.

## Protective Action Implementation

### Evacuation

Plans and procedures for implementing evacuation should include the following:

- Time estimates for evacuating portions of the IRZ and PAZ;
- Designated evacuation routes associated with each zone;
- Public instructions developed for each zone, including designated evacuation routes, reception center locations, and brief instructions on what to take along—instructions should be consistent with public education materials;
- Provision for law enforcement personnel to assist with traffic management, and TCPs should be identified at key intersections along evacuation routes;
- Designated evacuee reception locations (reception centers) should be set up for evacuees or persons relocating after shelter—guidance on setup, staffing, and services provided at reception centers may be found in the Reception Center Functions section of this document;
- Provision for people with access and functional needs. (See the subsection below: People with Access and Functional Needs);
- Provision for measures to help people who, for whatever reason, did not evacuate after the recommendation was given; and
- Provision for companion animals.

### Shelter-in-Place

Plans and procedures for implementing SIP should include:

- Public instructions, which are consistent with public education materials that have been distributed, and cover the following points:
  - The importance of prompt compliance

- Brief instructions for expedient shelter
- Reference to public education materials that have been distributed
- Use of sheltering kits, if they have been distributed
- The importance of having a radio to receive exit-shelter instructions
- Control of access to the sheltered area. TCPs should be identified along with resources (e.g., staff and barricades) to implement control.

Instructions should also take into consideration transient populations in the area at the time of the event. There may be considerable numbers of persons who lack exposure to prior public education efforts.

Planning for implementation of SIP should also include provisions for relocation after termination of SIP. Relocation implementation measures are similar to those for evacuation and should include designated routes, reception centers, traffic management, provisions for people with access and functional needs, and provisions for companion animals.

### **Maintaining Shelter-in-Place**

The expected time to remain in shelter is likely to be brief (30 minutes to 4 hours); therefore, most individuals will have no need to collect supplies, such as medications, prior to sheltering. Once established, the integrity of the shelter should be maintained to protect against air infiltration. It is permissible to briefly open an entry to the shelter to allow someone to enter after the shelter integrity is established if the alternative is to deny shelter to someone in need. It is unlikely that this will significantly decrease the protective value of the shelter. Occupants should not leave the shelter (or the room within the shelter that provides for the least air infiltration) for any reason other than an immediate life-threatening medical emergency, or until instructed to do so.

A device to monitor EAS or alert radio broadcasts is essential in the shelter. In addition, a phone or might be useful. To avoid overload of local telephone services, the telephone should not be used while in a shelter except for a dire medical emergency or to report clear symptoms of nerve agent exposure. Local plans and public education materials should cover who to call in the event of a medical emergency while sheltered, and what range of responses are likely.

The public education program should include the above information on maintaining shelter.

### **Ending Shelter-in-Place—Timing**

Ending SIP at the appropriate time is key to its protective effect. For each zone where the public has been instructed to take a protective action, the Army installation should provide a timely recommendation to exit shelter. Exit-shelter recommendations should be based on chemical plume modeling to estimate hazard levels at downwind locations. The model should have the following characteristics:

- It should be based on when the plume concentration outside becomes less than inside shelters.
- Consider the dose-response relationship that is most relevant to the effects of the agent on a sheltered population.
- Consider exposure before, during, and after SIP.
- Provide information to minimize fatalities.

In addition, it should be noted that the timing for ending SIP is most crucial for areas close to the source of the release, where dangerous concentrations are more likely to be encountered. The procedure for ending SIP should be able to distinguish between close-in areas and areas further away from the release source.

### Ending Shelter-in-Place—Method

Recommendations on how to end SIP will depend on several variables. Ventilation of the shelter is important if the shelter is within the hazard wedge or risk envelope, and the occupants are going to remain inside because they cannot exit. If they are going to exit or relocate, ventilation is not that important, and the additional time involved might result in additional harmful exposure in the process. In addition, some people might be reluctant to leave their homes unsecured and delay their exit and relocation while they secure their valuables, or collect their valuables to take with them. Below are options for how to end SIP:

- Resume normal activities with no restrictions. Resuming normal activity with no restrictions would be an appropriate action for persons who were never in danger, but who were sheltered as a precaution. This is the usual interpretation of “all clear.”
- Ventilate the shelter but remain indoors. In some cases the best action to end SIP might be to remain indoors but ventilate the building by opening doors and windows, removing tape and plastic installed during expedient sheltering, and turning on ventilation equipment. This might be the only option for disabled persons or people with access and functional needs who lack the mobility to exit the shelter. This option also might apply when the weather is so dangerous that remaining outside for an extended period is inadvisable or when there is believed to be some other hazard outdoors to be avoided.
- Exit the shelter and remain nearby. In order to decrease the overall exposure, it might be appropriate to instruct the public not to take the time to open windows, remove tape, and turn on ventilation equipment prior to leaving the building. Rather, they should simply go outside and let the building ventilate itself gradually. The potential for aerosol deposition (creating a contact hazard) should be a minor consideration, since it is such a remote possibility and not likely to be a safety factor at great distances from the source, even if an agent aerosol is generated by the event. This might also be the best option for persons who lack transportation to relocate.

- Relocate to a designated facility. Local officials may direct that upon the termination of SIP, sheltered populations should relocate to designated facilities to be accounted for and medically screened for agent exposure symptoms. In that case, the instructions would be to exit from shelters and proceed immediately to a place where this follow-up can occur. Instructions should identify the routes to take to avoid encountering the plume again and traffic bottlenecks. Designated routes and facilities for relocation might not be the same as for an initial evacuation. In dire circumstances, such as if the duration of the release is longer than originally expected and SIP is no longer a good choice, sheltered persons might be asked to relocate immediately to a safer place.

### **Collective Protection or Overpressurization**

Where pressurized shelters have been developed, protective action procedures should ensure that separate instructions are issued for persons in those shelters. Persons in pressurized shelters are not subject to the same time constraints as those in unpressurized shelters; the protective properties of the shelter will continue for a longer period than in an unpressurized shelter.

### **Access and Functional Needs**

As indicated in Chapter 5, emergency plans should take account of persons with access and functional needs at each stage of the preparedness and response process so that these populations are protected at least as well as the general population. Recommended preparedness measures for these populations include:

- Maintaining contact information;
- Measures to ensure alert and notification is received;
- Selection and implementation of protective actions; and
- Measures to ensure accommodation at reception centers and mass care facilities.

### **Maintaining Contact Information**

In order to provide assistance to access and functional needs populations, it is necessary to maintain information about their locations and needs. The plan should include lists of special facilities, with contact information, and mechanisms for updating the list (i.e., by contacting the agencies that license them). Planners should also make an effort to collect and maintain information on access and functional needs individuals not in special facilities, including contact information and the nature of their access and functional needs, through self-identification.

Mechanisms to obtain such information are:

- Having tear-off notification cards in public education materials; and
- Working with welfare or social service agencies, religious, fraternal, social, and service organizations, and volunteer and nonprofit groups at the State, county, and community levels. While the need for confidentiality generally prevents such agencies from

providing direct information, they may be willing to provide questionnaires, referral information, and assistance to their clients who can then identify themselves to emergency planners.

Information about access and functional needs individuals and the arrangements made on their behalf must be protected from public disclosure; it should be available to emergency responders but limited to those with a need to know. Plans should also include mechanisms for updating this information at least annually.

### **Assistance to Access and Functional Needs Populations**

The following should be considered when providing protective action plans for those with access and functional needs:

- *Assistance or special equipment for notification.* Persons with sight or hearing impairments may need special equipment in order to receive alert and notification. See Chapter 11 for further discussion of alert/notification measures for access and functional needs populations.
- *Provision of educational materials and emergency instructions in languages other than English.* Education materials and emergency information should be translated into a foreign language if the state determines through survey or other means that one percent or more of the population at risk speaks that language but does not speak English. An effort should be made to have translation services available at key response locations such as reception centers, medical centers and mass care shelters.
- *Special equipment for alert and notification of special facilities.* For example, it may be appropriate to provide TARs to special facilities, even where they are not provided to the public generally.
- *Separate PADs for access and functional needs populations.* In some cases (e.g., for facilities or individuals where evacuation would be difficult, time-consuming, or dangerous), it may be appropriate to plan for recommending SIP for those facilities or persons, even though the general public is recommended to evacuate. Where protective action options are limited, it may also be appropriate to consider providing for enhanced or pressurized shelter.
- *Assistance with carrying out protective actions.* If resources are available, either through emergency response agencies or from volunteers, arrange for assistance to access and functional needs individuals for implementing protective actions (e.g., rides for evacuation or help with carrying out expedient SIP).
- *Host facilities for special facilities.* Where special facilities may be evacuated, host facilities outside the PAZ should be identified that can accommodate the access and functional needs of the evacuated facilities' occupants.

Schools are an example of a distinctive type of special facility. Measures to protect children in such facilities should be carefully planned and well publicized. In particular, special attention should be given to informing parents about arrangements for the protection of children. Major safety problems could occur if parents attempt to pick up their children at schools during an evacuation. Parents need to be confident that their children are being cared for and know where the children can be found after the evacuation. This information should be included in public education materials and in emergency instruction messages such as EAS messages.

## Reception and Care of Evacuees

Persons advised to evacuate (or to shelter in place and then relocate) should be advised to proceed along designated routes to locations where they can receive further emergency services, including reception and mass care. Reception, as used in this guide, refers to a process in which evacuees receive a very quick evaluation for medical needs, expedient decontamination if necessary, are referred for further medical care if needed, are registered for tracking purposes, and are referred to a mass care shelter if they need a place to stay. A reception center, as used in this guide, refers to a location where reception functions are performed. A reception center can be at a facility or at a TCP. Mass care, as used in this guide, refers to providing shelter, food, and other services in a temporary residential setting.

### Reception Center Functions

Reception centers should be located as close as possible to the area affected by the emergency. The farther away they are, the longer it takes to get there, which may be detrimental to evacuees who need help (e.g., those suffering effects of agent exposure). Reception centers should be located where large flows of traffic can be handled quickly and efficiently. Reception center staffing should include law enforcement personnel for security and traffic management.

Upon arrival at the reception center, evacuees should be quickly evaluated for signs of agent exposure or other medical distress. Speed is essential for this process since there may be a few people with potentially serious medical problems among a very large number of relatively unaffected people. The reception center should be designed and staffed to promote this quick evaluation (e.g., an EMT-trained “greeter” might perform a quick visual exam of incoming evacuees, and ask them a few questions, such as where they came from, when they left, whether they were sheltered-in-place first, and whether they are experiencing a short list of agent systems such as dim vision or headaches).

Evacuees showing symptoms of agent exposure should be offered immediate expedient decontamination and referred for further medical treatment, which might include complete personal decontamination. Expedient decontamination, as used in this guide, refers to removing the outer layer of clothing, washing exposed skin and hair with soap and water, and providing a suitable replacement for outer clothing. Complete personal decontamination refers to washing the entire body with soap and water and a complete change of clothing.

Evacuees showing other signs of distress (not apparently agent exposure related) should also be referred for further medical treatment. Preferably, there should be EMTs and at least an expedient decontamination capability at the reception center.

Evacuees who do not need immediate medical attention should be offered the following services:

- Registration to establish that they arrived at the reception center, account for their personal safety, and allow for reuniting families who have been separated;
- Mass care for those who need a place to stay; and
- Decontamination (at least expedient decontamination).

To the extent that these services are provided at the reception center, the reception center should be arranged and managed so that evacuees waiting for these services do not cause a bottleneck that slows down the medical screening process for subsequent arrivals.

### **Mass Care Functions**

Based on past evacuations from various natural and technological emergencies, generally about 15 to 30 percent of evacuees receive assistance at mass care centers. Mass care centers are typically operated by the American Red Cross (Red Cross) pursuant to national and local agreements. The [Red Cross](#) has established guidelines for selecting facilities for use as mass care centers, and has procedures and training on how to operate them. Red Cross guidelines prohibit co-locating a decontamination operation with a mass care facility. Facilities to be used for mass care should be pre-designated and generally should be located outside the PAZ.

Red Cross activities in the mass care centers must be coordinated with other emergency response functions. Therefore it is desirable to have a Red Cross liaison at one or more off-post EOCs to handle inquiries about missing persons, track the number of persons at mass care centers, and coordinate with other response organizations. Mass care centers may need support from local jurisdictions for law enforcement, traffic management, transportation, medical care, and other functions.

### **Reception and Care for Persons with Access and Functional Needs**

Accessibility of all emergency services, including reception and mass care, is required under the Americans with Disabilities Act (ADA) and FEMA policy. CSEPP planners should think through the entire process of evacuation, reception, and mass care in terms of access for persons with access and functional needs; in addition, planners should seek participation in the planning/review process by representatives of organizations for the disabled.

Extensive guidance and review criteria are available on the subject of accommodating persons with access and functional needs in emergency planning generally, and mass care shelters in particular. Planners should consult FEMA's [Accommodating Individuals with Disabilities in the](#)

*Provision of Disaster Mass Care, Housing, & Human Services Reference Guide*, and U.S. Department of Justice (DOJ), *ADA Best Practices Tool Kit for State and Local Governments, Chapter 7: Emergency Management under Title II of the ADA*. Addendum 2 to the latter is entitled, *The ADA and Emergency Shelters: Access for All in Emergencies and Disasters*. Addendum 3 is a checklist for reviewing accessibility of emergency shelters. CPG 101 also addresses accessibility issues in its review criteria for shelters (see Chapter 4, Step 5).

The DOJ best practices guide includes a “mainstreaming” concept—people with access and functional needs should be accommodated, as far as practicable, in ordinary public shelters, rather than in a specialty facility. FEMA has developed a guide specifically on this topic: *Guidance on Planning for Integration of Functional Needs Support Services in General Population Shelters* (November 2010).

### **Provision for Pets and Service Animals**

In the *Pets Evacuation and Transportation Act (PETS Act)*, (Public Law 109-308; October 2006), Congress established policies to include pets and service animals in emergency planning and response. The PETS Act promotes incorporation of pets and service animals into Federal, State, and local emergency plans and preparations, and makes pet-care expenses eligible for Federal reimbursement in presidentially-declared emergencies and disasters.

*Accommodation of Pets.* Most Red Cross shelters do not accommodate pets. FEMA and Red Cross policies encourage people to provide private arrangements for care of their pets in an emergency. However, in a large-scale evacuation it may be anticipated that there will be some pets that need emergency shelter separate from their owners. The plan should identify agency responsibilities for coordination of pet care and resources for care of evacuated pets (e.g., animal control shelters, nonprofit household pet rescue shelters, private breeding facilities, and kennels). CPG 101 contains a detailed checklist of points for review of mass care plans with respect to pets and service animals. [See *FEMA CPG 101, Developing and Maintaining Emergency Operations Plans* (November 2010), Chapter 4 and Appendix C.]

*Service Animals.* Under the ADA, service animals must be accommodated in mass care shelters (unlike pets). Service animals include the familiar seeing-eye dogs and other animals that may provide a variety of services to someone with a disability. Examples include alerting people who are deaf or hard of hearing to sounds; pulling wheelchairs; carrying or retrieving items for people with mobility disabilities or limited use of arms or hands; assisting people with disabilities to maintain their balance; and alerting people to, and protecting them during, medical events such as seizures. An animal that has been trained to work or perform tasks for a person with a disability qualifies as a service animal and must generally be allowed to accompany its owner anywhere other members of the public are allowed to go.

## Emergency Worker Protection

The U.S. OSHA establishes regulations for workplace safety, including rules for when particular types of PPE are needed and what types of protective equipment may be used. OSHA rules governing emergency workers who may be exposed to toxic materials are found in subsection Q of the HAZWOPER rule at 29 CFR 1910.120. [State and local government employees are not under OSHA's jurisdiction, but are subject to U.S. EPA rules. The U.S. EPA has issued a rule (40 CFR 311) that incorporates the HAZWOPER requirements. In other words, State and local government emergency workers are subject to the HAZWOPER requirements via the EPA rule.]

OSHA encourages states to administer their own workplace safety programs, and reviews/approves state plans to do so. Kentucky has an approved State plan and thus administers workplace safety regulations within the State. In Colorado, occupational safety rules are administered by the Federal OSHA.

As is the case for any response situation potentially involving hazardous materials, protective equipment and work rules for CAI response should be selected based on a hazard analysis that includes consideration of the specific tasks to be performed. Different response tasks may require different levels of protection. Operationally, personnel protection is the responsibility of the Incident Commander, with advice and assistance from the Safety Officer.

NIOSH has published a summary of standards applicable to PPE for emergency responders facing the potential for chemical or radiological exposure: *Guidance on Emergency Responder Personal Protective Equipment (PPE) for response to Chemical, Biological, Radiological, and Nuclear (CBRN) Terrorism Incidents*, HHS (NIOSH) Publication No. 2008-132. This document is a good starting point for researching applicable standards.

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# Appendix A:

## Blue Grass Risk Snapshot

### Blue Grass Army Depot

The Blue Grass Army Depot (BGAD) is located approximately 25 miles southeast of Lexington, Kentucky, near the town of Richmond. The depot size is approximately 15,000 acres, with 255 acres dedicated to the storage of chemical weapons.

The BGAD chemical stockpile consists of two types of chemical agent: a blister agent (mustard) and two nerve agents (GB and VX). The nerve agent GB is commonly called sarin.

Storage of mustard agent began in 1944, and nerve agent storage commenced in the mid-1960s. The stockpile is stored in 45 concrete structures (igloos) inside a secure, restricted area. The igloos store approximately 523 tons of chemical agent in ~102,000 projectiles and rockets. The chemical agent will be destroyed on-site at the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP), which borders the chemical storage area.



**Blue Grass Army Depot**

### Storage and Destruction

The Blue Grass Chemical Activity (BGCA) mission is the safe storage of its stockpile of chemical weapons. The chemical agent igloos are located near BGAD's northern boundary in an area of approximately one square kilometer.

Destruction of the chemical stockpile is managed by the Assembled Chemical Weapons Alternatives Program Manager in Edgewood, Maryland, and the BGAD. The Bechtel Parsons Blue Grass is the systems contractor that will design, build, and operate the BGCAPP. The chemical agent will be destroyed by chemical neutralization followed by super critical water oxidation.

## Vulnerability

BGAD is located in a heavily-populated section of Madison County, which has an estimated population of 82,916 and 30,756 households (2010 Census). Madison and Estill Counties have been designated as IRZ counties for planning purposes. Other counties in the CSEPP footprint include Powell, Clark, Garrard, Jessamine, Rockcastle, Jackson, Fayette, and Laurel.

## Hazard Description

Sulfur mustard (agent HD) is an alkylating chemical vesicant that affects any epithelial surface it comes in contact with; it has been developed and used as a warfare agent. Mustard agent has a relatively high freezing point (58 °F) and due to its low aqueous solubility, it is persistent in the environment. Mustard vapor has a garlic-like odor.

Exposure to sulfur mustard vapor may result in irritation and damage to the eyes, respiratory tract, and skin. The toxic effects of sulfur mustard are temperature- and humidity-dependent; for a given exposure, the effects could be greater with increasing temperature and humidity. The eyes are the most sensitive organ/tissue; deaths resulting from sulfur mustard exposure are more often the result of respiratory tract involvement. Mustard agent is classified as a carcinogen.

Nerve agents are toxic ester derivatives of phosphonic acid containing a cyanide, fluoride, or sulfur substituent group; they are commonly termed “nerve” agents as a consequence of their anticholinesterase properties. These compounds were developed as chemical warfare agents, and one (sarin) was used by terrorists in the 1995 Tokyo subway system incident. Toxic effects may occur at vapor concentrations below those of odor detection. Agent VX is an amber-colored liquid with a vapor density of 9.2 (air = 1) and is considered odorless. As a consequence, agent VX vapor possesses no olfactory warning properties. VX is approximately 2,000 times less volatile than nerve agent GB. As a consequence, agent VX is a persistent, “terrain denial” military compound with the potential to off-gas toxic vapor for days following surface application.

Exposure to acutely-toxic concentrations of nerve agents can result in excessive bronchial, salivary, ocular, and intestinal secretions and sweating, miosis, bronchospasm, intestinal hypermotility, bradycardia, muscle fasciculations, twitching, weakness, paralysis, loss of

consciousness, convulsions, depression of the central respiratory drive, and death. Minimal effects observed at low vapor concentrations include miosis (contraction of the pupils of the eye, with subsequent decrease in pupil area), tightness of the chest, rhinorrhea, and dyspnea.

## Daily Planning/ Worst-Case Maximum Credible Event (MCE) Plume

The Army assigns risk to categories in a Risk Assessment Code (RAC), accounting for the hazard probability (ranging from frequent to unlikely) and the hazard severity (ranging from negligible to catastrophic).

BGCA uses the RAC in daily planning for all chemical operations. For each chemical operation, BGCA plans for a potential accident (called the Maximum Credible Event). Using the current meteorological conditions, the BGCA projects a hypothetical chemical plume assuming the MCE occurs (using the WebPuff™ model). If the AEGL-3 chemical threshold level is projected to exceed the BGAD boundary (and hence reach the general population), the operation is prohibited from being conducted. MCEs are typically either a spill of chemical agent or an explosion of a chemical munition. These hypothetical MCE plumes generally do not exceed the BGAD boundary. However, because of its design and aluminum construction, the M55 rocket MCE includes a second ‘sympathetic’ detonation of a second rocket and damage to an entire pallet of 15 rockets. These hypothetical plumes could exceed the BGAD boundary and require more detailed planning and monitoring than the other munitions in the stockpile.



**M55 rockets in storage**

## Risk Description

DHS defines risk as the “potential for an unwanted outcome resulting from an incident, event, or occurrence, as determined by its likelihood and the associated consequences.” For CSEPP, risk is primarily a function of the chemical stockpile characteristics (i.e., physical and toxicological properties of chemical agent) combined with the probability of an accident release and the community emergency response characteristics (e.g., ability to evacuate and effectiveness of shelters). The risk results combine all possible chemical stockpile accidents with all possible weather conditions.

Due to the nature of potential accidents involving the chemical munitions, the physical properties of the chemical agents, and the distance to the BGAD boundary, chemical agent in liquid or

droplet form is not expected to reach the BGAD boundary. The risk to the general public is limited to exposure to potential chemical agent vapors.

The largest contributors to public risk from the BGAD chemical stockpile are external events that involve a large number of munitions: lightning-induced fires (71%) and seismic events (27%) comprise the bulk of the storage risk.

The risk from the chemical stockpile can be expressed in a number of ways. The two common methods used within CSEPP are risk of fatality and exceedence of occurrence of an exposure threshold (e.g., AEGL-2).

Select risk results include:

- For the public closest to the stockpile, the individual risk of fatality is an estimated ~ 0.7 in 1 million per year, which is slightly less than the common ‘acceptable’ risk measure of 1 in 1 million per year. The risk decreases with increasing distance from the stockpile. At a distance of 15 km (10 miles) – the approximate extent of the IRZ – the individual risk of fatality is ~1 in 100 million per year (note: Madison County EMA selected the standard 1 in 100 million for maximum protection for collective pressurization of schools).
- The estimated frequency of occurrence for the AEGL-3 (threshold for severe symptoms) at the nearest BGAD boundary is one event every 40,000 years. The frequency of the AEGL-2 (threshold for mild-moderate symptoms) is one event every 25,000 years.
- In Fayette County, the AEGL-3 frequency is generally less than 1 in 1 million per year.
- Although the BGAD chemical stockpile poses a very real risk to the surrounding general public, the results indicate that the risk is low.

### References

- Acute Exposure Guideline Levels for Selected Airborne Chemicals, Volume 3, The National Academies Press, 2003
- Toxic Chemical Agent Safety Standards, Department of Army Safety Pamphlet 385-61, 17 December 2008
- DHS Lexicon
- Blue Grass Chemical Agent-Destruction Pilot Plant Screening Quantitative Risk Assessment for Public Risk, SAIC, May 2009
- Kentucky Requirements Analysis for AEGL Adoption, IEM, March 2003

# Appendix B: Pueblo Risk Snapshot

## Pueblo Chemical Depot

The Pueblo Chemical Depot (PCD) is located on 23,000 acres of land approximately 14 miles east of Pueblo, Colorado. The depot size is approximately 33 square miles, with 600 acres dedicated to the storage of chemical weapons.

The entire chemical stockpile consists of a single type of chemical agent, a blister agent called mustard.

Storage of mustard agent began in the 1950s. The stockpile is stored in 102 concrete structures (igloos) inside a secure, restricted area. The igloos store approximately 2,611 tons of chemical agent in ~780,000 cartridges and projectiles. The chemical agent will be destroyed on-site at the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP), which borders the chemical storage area.



Pueblo Chemical Depot

## Storage and Destruction

The PCD mission is the safe storage of its stockpile of chemical weapons. The chemical agent igloos are located near PCD's northern boundary in an area of approximately one square mile.

Destruction of the chemical stockpile is managed by the Assembled Chemical Weapons Alternatives Program Manager in Edgewood, Maryland, and the PCD. The Bechtel Pueblo Team is the systems contractor that will design, build, and operate the PCAPP. The mustard agent will be destroyed by chemical neutralization followed by biotreatment.

## Vulnerability

PCD is located in a lightly-populated section of Pueblo County, which has an estimated population of 159,063 residents and 61,418 households (2010 Census). Pueblo County has been designated as an IRZ county for planning purposes.

## Hazard Description

Sulfur mustard (agent HD) is an alkylating chemical vesicant that affects any epithelial surface it comes in contact with; it has been developed and used as a warfare agent. Mustard agent has a relatively high freezing point (58 °F) and due to its low aqueous solubility, it is persistent in the environment. Mustard vapor has a garlic-like odor.

Exposure to sulfur mustard vapor may result in irritation and damage to the eyes, respiratory tract, and skin. The toxic effects of sulfur mustard are both temperature- and humidity-dependent; for a given exposure, the effects could be greater with increasing temperature and humidity. The eyes are the most sensitive organ/tissue; deaths resulting from sulfur mustard exposure are more often the result of respiratory tract involvement. Mustard agent is classified as a carcinogen.

## Daily Planning/Worst-Case Maximum Credible Event (MCE) Plume

The Army assigns risk to categories in a Risk Assessment Code (RAC), accounting for the hazard probability (ranging from frequent to unlikely) and the hazard severity (ranging from negligible to catastrophic).

PCD uses the RAC in daily planning for all chemical operations. For each chemical operation, PCD plans for a potential accident (called the Maximum Credible Event). Using the current meteorological conditions, the PCD projects a hypothetical chemical plume assuming the MCE occurs (using the WebPuff™ model). If the AEGL-3 chemical threshold level is projected to exceed the PCD boundary (and reach the general population), the operation is prohibited from being conducted. MCEs are typically either a spill of chemical agent or an explosion of a chemical munition. These hypothetical MCE plumes generally do not exceed the PCD Chemical Limited Area and are not expected to reach the PCD boundary. Accidents that threaten the general public have a lower probability than MCEs.



**Mustard 155 mm munitions in storage**

## Risk Description

DHS defines risk as the “potential for an unwanted outcome resulting from an incident, event, or occurrence, as determined by its likelihood and the associated consequences.” For CSEPP, risk is primarily a function of the chemical stockpile characteristics (i.e., physical and toxicological properties of chemical agents) combined with the probability of an accident release and the community emergency response characteristics (e.g., ability to evacuate and effectiveness of shelters). The risk results combine all possible chemical stockpile accidents with all possible weather conditions.

Due to the nature of potential accidents involving the chemical munitions, the physical properties of the chemical agents, and the distance to the PCD boundary, chemical agent in liquid or droplet form is not expected to reach the PCD boundary. The risk to the general public is limited to exposure to potential chemical agent vapors.

The largest contributors to public risk from the PCD chemical stockpile are external events that involve a large number of munitions (e.g., airplane crashes and seismic events).

The risk from the chemical stockpile can be expressed in a number of ways. The two common methods used within CSEPP are risk of fatality and exceedence of occurrence of an exposure threshold (e.g., AEGL-2).

Select risk results include:

- For the public closest to the stockpile, the individual risk of fatality is an estimated 1 in 100 million per year. This risk is much less than the common ‘acceptable’ risk measure of 1 in 1 million per year. The risk decreases with increasing distance from the stockpile.
- The estimated frequency of occurrence for the AEGL-3 (threshold for severe symptoms) at the nearest PCD boundary is one event every 1 million years. The frequency of the AEGL-2 (threshold for mild-moderate symptoms) is one event every 200,000 years.
- Although the PCD chemical stockpile poses a very real risk to the surrounding general public, the results indicate that the risk is very low.

### References

- Acute Exposure Guideline Levels for Selected Airborne Chemicals, Volume 3, The National Academies Press, 2003
- Toxic Chemical Agent Safety Standards, Department of Army Safety Pamphlet 385-61, 17 December 2008
- DHS Lexicon
- Pueblo Chemical Agent-Destruction Pilot Plant Phase 1 Quantitative Risk Assessment, SAIC, December 2011
- Technical Analysis for Acute Exposure Guideline Level (AEGL) Adoption, Pueblo Chemical Depot Site, IEM, May 2003

# Appendix C: Glossary of Terminology and Acronyms

**Access and Functional Needs Populations**—Populations whose members may have additional needs before, during, and after an incident in functional areas, including but not limited to: maintaining independence, communication, transportation, supervision, and medical care. Individuals in need of additional response assistance may include those who have disabilities; who live in institutionalized settings; who are elderly; who are children; who are from diverse cultures; who have limited English proficiency or are non-English speaking; or who are transportation disadvantaged.

**Alert and Notification System**—A combination of sirens, tone alert radios, and other means to be used in the IRZ and selected portions of the PAZ to provide alert and emergency instructions to the public.

**Chemical Accident/Incident (CAI)**—Unintentional chemical event where chemical agent is released into the ambient atmosphere and either threatens unprotected personnel or has the potential to threaten unprotected personnel. It includes chemical accidents resulting from non-deliberate events where safety is of primary concern, and chemical incidents resulting from deliberate acts or criminal acts where security is of concern.

**Chemical Agent**—A chemical substance listed in Appendix B of AR 50-6 that is intended for use in military operations to kill, seriously injure, or incapacitate a person through its physiological properties. Excluded from consideration are industrial chemicals, riot control agents, chemical herbicides, and smoke and flame munitions.

**Chemical Demilitarization Program**—The overall DOD program that is responsible for eliminating all stockpile and non-stockpile chemical agents, munitions, and related materials in U.S. states and territories. This program includes the Chemical Stockpile Disposal Program, the Alternative Technologies and Approaches Project, the Non-Stockpile Chemical Materiel Product, the Chemical Stockpile Emergency Preparedness Program, and the Assembled Chemical Weapons Alternatives Program.

**Chemical Event**—The term encompasses chemical agent material accidents, incidents, and other circumstances where there is a confirmed or likely release to the environment, exposure of personnel, leaking munitions, threat to the security of chemical agents, or incident of concern to the local Commander.

**Chemical Event Emergency Notification System**—A tiered system by which the Army classifies chemical surety emergencies according to expected downwind hazard distance and provides appropriate notification to off-post public officials.

**Chemical Stockpile Disposal Program (CSDP)**—A congressionally-mandated program that requires the Army to dispose of all of its unitary chemical agents and munitions at its chemical stockpile sites while ensuring maximum protection to the environment, the general public, and personnel involved in the destruction effort.

**Chemical Stockpile Emergency Preparedness Program (CSEPP)**—A joint Army/FEMA program designed to enhance existing local, installation, State, and Federal capabilities to protect the health and safety of the public, work force, and environment from the effects of a CAI involving the U.S. Army chemical stockpile.

**Chemical Surety**—A system of control measures designed to provide protection to the local population, workers, and the environment by ensuring that chemical agent operations are conducted safely; that chemical agents are secure; and that personnel involved in those operations meet the highest standards of reliability.

**Contamination**—Having a substance get on one's clothing, shoes, hair, exposed skin, or eyes. Contamination may lead to continued chemical exposure and may expose others to the same hazard.

**CSEPP Community**—The combined area of one military installation, its surrounding local jurisdictions, and the State agencies involved in executing CSEPP for that area.

**CSEPP Hospital**—A hospital in the vicinity of a chemical installation that has been designated for participation in the CSEP Program by the CSEPP regional office or by MOU with the Army.

**CSEPP Jurisdiction**—The smallest area of geography within which political authority may be exercised with regards to CSEPP (e.g., a county or city).

**Decontamination**—The process of decreasing the amount of chemical agent on any person, objective, or area by absorbing, neutralizing, destroying, ventilating, or removing chemical agents.

**Demilitarization**—The mutilation, destruction, or neutralization of chemical agent material, rendering it harmless and ineffectual for military purposes.

**Emergency Alert System (EAS)**—A system created by the Federal Communications Commission that uses communications facilities to alert the public to emergencies (formerly known as the Emergency Broadcast System).

**Emergency Operations Center (EOC)**—The physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines (e.g., fire, law enforcement, and medical services), by jurisdiction (e.g., Federal, State, regional, city, county), or by some combination thereof.

**Emergency Plan**—The ongoing plan maintained by various jurisdictional levels for responding to a wide variety of potential hazards.

**Emergency Planning Zone (EPZ)**—A geographical area delineated around a potential hazard generator that defines the potential area of impact. Zones facilitate planning for the protection of people during an emergency.

**Emergency Response Outcomes (EROs)**—The CSEPP EROs are set of metrics and performance measures to assess the ability of CSEPP communities to prepare for, respond to, and recover from a chemical weapons event emanating from an Army installation. They are documented in the *[Exercise Policy and Guidance for the Chemical Stockpile Emergency Preparedness Program \(Blue Book\)](#)*.

**Evacuation**—Organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas, and their reception and care in safe areas.

**Exposure**—Contact by a person or animal with chemical agent in either liquid or vapor form through inhalation, contact with the eyes or skin, or ingestion of contaminated food or water. Vapor exposure does not necessarily lead to contamination. For each route of exposure and potential contamination by a chemical, the risk of injury depends on several factors. These include:

- The toxicity of the chemical involved.
- The amount and/or concentration of the chemical.
- The duration of the contact.
- The route of exposure.
- The individual's age and general health.

**First Receiver**—Hospital employees, who may be termed first receivers, work at a site remote from the location where the hazardous substance release occurred. The location and limited source of the contaminant distinguishes the first receivers from other first responders (e.g., firefighters, law enforcement, and ambulance service personnel) who typically respond to the incident site (i.e., the

Release Zone). OSHA recognizes that first receivers have somewhat different training and personal protective equipment (PPE) needs than workers in the hazardous substance Release Zone, a point clarified through letters of interpretation.

**First Responder**—Local and nongovernmental police, fire, and emergency personnel who, in the early stages of an incident, are responsible for the protection and preservation of life, property, evidence, and the environment, including emergency response providers as defined in Section 2 of the Homeland Security Act of 2002 (6 USC 101), as well as emergency management, public health, clinical care, public works, and other skilled support personnel (such as equipment operators) who provide immediate support services during prevention, response, and recovery operations. First responders may include personnel from Federal, State, local, or nongovernmental organizations.

**Full-Scale Exercise (FSE)**—A mandatory, federally-evaluated demonstration of a community’s full capabilities to respond to a chemical emergency.

**Immediate Response Zone (IRZ)**—The emergency-planning zone immediately surrounding each Army installation. It generally extends to about six miles from the installation’s chemical storage area.

**Initial Response Force (IRF)**—An emergency actions organization tasked to provide first response to a CAI at an installation assigned a chemical surety mission or in the public domain. Under the command of the Installation Commander or Commander of the nearest Army installation, the IRF is composed of command and control elements and emergency teams capable of providing emergency medical services and initiating those actions necessary to prevent, minimize, or mitigate hazards to public health and safety or to the environment.

**Joint Information Center (JIC)**—A facility established to coordinate incident-related public information activities and that serves as a central point of contact for the news media.

**Joint Information System (JIS)**—A system to integrate emergency information and public affairs into a cohesive organization designed to provide consistent, coordinated, accurate, accessible, timely, and complete information during accident or incident response.

**Local Government**—A county, municipality, city, town, township, local public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law or not), regional or interstate government entity, agency or instrumentality of a local government; an Indian tribe or authorized tribal entity or, in Alaska, a Native Village or Alaska Regional Native Corporation; a rural community, unincorporated town or village, or other public entity.

**Mass Casualty Incident**—An incident that generates more patients than available resources can manage using routine procedures and that will require assistance from outside agencies.

**Mutual Aid and Assistance Agreement**—Written or oral agreement between and among agencies/organizations and/or jurisdictions that provides a mechanism to quickly obtain emergency assistance in the form of personnel, equipment, materials, and other associated services. The primary objective is to facilitate rapid, short-term deployment of emergency support prior to, during, and/or after an incident.

**National Contingency Plan (NCP)**—Officially titled the *National Oil and Hazardous Substances Pollution Contingency Plan*, this is the Federal Government’s blueprint for responding to oil spills and hazardous substance releases. Activities under the NCP are overseen by an on-scene coordinator.

**Off-post**—The area outside the boundaries of a military installation or facility.

**Off-site**—The area surrounding the on-site area.

**On-post**—A military installation or facility.

**On-site**—An area around the scene of a chemical event under the operational control of the On-site Commander, Technical Escort Officer, or the IRF or SRF Commander. Includes any area established as a National Defense Area.

**Protective Action Decision (PAD)**—Those decisions by State and local officials on what protective action instructions to recommend to the public, based upon hazard information, specific emergency planning zones, recommendations from the Installation Commander, and other information.

**Protective Action Recommendation (PAR)**—Those initial and subsequent recommendations by the Installation Commander to off-post community officials in response to a CAI. These recommendations may include evacuation, shelter-in-place, and exit shelter-in-place.

**Protective Action Zone (PAZ)**—A second emergency planning zone beyond the immediate response zone (IRZ). It generally extends to about 18-35 miles from the installation’s chemical storage area.

**Release**—Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant. For purposes of the NCP, release also means threat of release. There are exclusions to this definition (see NCP).

**Re-entry**—The entry of persons into an affected area following a hazardous materials incident. Re-entry can be restricted (entry of monitoring crews) or unrestricted (unlimited public access).

**Relocation Points**—Areas to which a population or community can be temporarily or permanently removed in response to an emergency or disaster. Relocation is distinguished from evacuation in that during an emergency, the potential for a release exists; in contrast, during the relocation phase, there is no passing plume.

**Restoration**—Includes those efforts and resources needed to return a contaminated area to a condition safe for unprotected public access and use.

**Shelter-in-Place (SIP)**—A protective action that involves taking cover in a building and taking steps to limit natural ventilation in order to reduce exposure to a hazard. Different categories include normal, expedient, enhanced, or pressurized shelters.

**State**—When capitalized, refers to the government of any state of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any possession of the United States.

**Tabletop Exercise (TTX)**—As described in HSEEP guidance, an exercise used to assess plans, policies, and procedures or to assess types of systems needed to guide the prevention of, response to, or recovery from a defined incident.

**Volunteer**—Any individual accepted to perform services by the lead agency, which has authority to accept volunteer services, when the individual performs services without promise, expectation, or receipt of compensation for services performed. See 16 USC 742f(c) and 29 CFR 553.101.

## Acronyms

### CSEPP Benchmarks:

ADM	Administration
PER	Personnel
COP	Coordinated Plans
MED	Medical Preparedness
TRA	Training
EX	Exercises
COM	Communications
ADP	Automation (automated data processing)
A&N	Alert and Notification
EOC	Emergency Operations Center
POE	Public Outreach and Education
PRO	Protective Actions

### Alphabetical Listing

AC	Area Command
ACPs	Access control points
ACS	Auxiliary Communication Service
ACWA	Assembled Chemical Weapons Alternatives
ADA	Americans with Disabilities Act
ADP	automated data processing
AEGLs	Acute Exposure Guideline Levels
AELs	Airborne Exposure Limits
AISs	Automated Information Systems
AMC	Army Materiel Command
AOC	Army Operations Center
APG	Aberdeen Proving Ground
ARES	Amateur Radio Emergency Services
BGCA	Blue Grass Chemical Activity
CA	Cooperative Agreement
CAI	Chemical Accident or Incident
CAIRA	Chemical Accident or Incident Response and Assistance
CAP	Common Alerting Protocol
CBRN	Chemical, Biological, Radiological, and Nuclear
CDC	Centers for Disease Control and Prevention
CDFs	chemical disposal facilities
CENLs	Chemical Event Notification Levels

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulation
CMA	Chemical Materials Activity
CMAS	commercial mobile-telephone alert system
CONOPS	concept of operations
CONUS	continental United States
CPG 101	Comprehensive Preparedness Guide 101
CSEPP	Chemical Stockpile Emergency Preparedness Program
CSWAN	Chemical Stockpile Wide Area Network
DHS	Department of Homeland Security
DIACAP	Department of Defense Information Assurance Certification and Accreditation Process
DOD	Department of Defense
DOJ	Department of Justice
DPEIS	Draft Programmatic Environmental Impact Statement
EAS	Emergency Alert System
EEGs	emergency evaluation guidelines
EMI	Emergency Management Institute
EMS	emergency medical service
EMTALA	Emergency Medical Treatment and Active Labor Act
EOC	emergency operations center
EOP	Emergency Operations Plan
EOPT	Emergency Operations Planning Template
EPA	Environmental Protection Agency
ERCP	Emergency Response Concept Plan
ERO	Emergency Response Outcome
ERPS	emergency response planning scenario
ESF	Emergency Support Function
ExPlan	Exercise Plan
FADs	Funding Authorization Documents
FCC	Federal Communications Commission
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency
FPEIS	final programmatic environmental impact statement
FSE	full-scale exercises
FY	fiscal year
FYDP	Future Years Defense Program
GAO	Government Accountability Office
GETS	Government Emergency Telecommunications Service
GPD	Grant Programs Directorate
GPLs	General Population Limits

HazMat	Hazardous Materials
HAZWOPER	hazardous waste operations and emergency response
HCC	Hospital Command Center
HIPAA	Health Insurance Portability and Accountability Act
HSEEP	Homeland Security Exercise and Evaluation Program
HVAC	heating, ventilation, and air conditioning
IA	information assurance
ICS	Incident Command System
IDLH	Immediately Dangerous to Life or Health
IPAWS	Integrated Public Alert and Warning System
IPTs	Integrated Process Teams
IRF	Installation Response Force
IRZ	Immediate Response Zone
JIC	Joint Information Center
JIS	Joint Information System
JMC	Joint Munitions Command
JPEO-CBD	Joint Program Executive Office – Chemical and Biological Defense
LCCE	life cycle cost estimate
LEPC/SERC	Local Emergency Planning Committee/State Emergency Response Commission
MAC Groups	Multi-Agency Coordination Groups
MACS	Multiagency Coordination System
MCE	maximum credible event
MEGS	Medical Evaluation Guides
MOA	Memorandums of Agreement
MOU	Memorandum of Understanding
MSDS	Material Safety Data Sheets
MWG	Medical Work Group
NCP	National Contingency Plan
NECD	Newport Chemical Depot
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Agency
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NIPRNET	Non-Classified Internet Protocol Router Network
NOAA	National Oceanic and Atmospheric Administration
NRC	National Response Center
NRF	National Response Framework
O&M	Operations and Maintenance
OMB	Office of Management and Budget
ORISE	Oak Ridge Institute for Science and Education
ORNL	Oak Ridge National Laboratory

OSC	On-Scene Coordinator
OSD	Office of the Secretary of Defense
OSHA	Occupational Safety and Health Administration
PAD	protective action decision
PAO	Public Affairs Officer
PAR	protective action recommendation
PAZ	Protective Action Zone
PCD	Pueblo Chemical Depot
PETS Act	Pets Evacuation and Transportation Act
PIO	Public Information Officer
PMT	Program Management Team
POCs	points of contact
POE	Program Office Estimate
POM	Program Objective Memorandum
PPBE	Planning, Programming, Budgeting, and Execution
PPD	Presidential Policy Directive
PPE	personal protective equipment
QRAs	Quantitative Risk Assessments
RAC	Risk Assessment Code
RACES	Radio Amateur Civil Emergency Services
Red Cross	American Red Cross
SBA	Small Business Administration
SCO	State Coordinating Officer
SimCell	Simulation Cell
SIP	shelter-in-place
SOP	standard operating procedure
STEL	Short-Term Exposure Limit
TAR	Tone Alert Radio
TCPs	traffic control points
THD	Technological Hazards Division
TIA	Telecommunications Industry Association
TTX	tabletop exercises
TWA	time-weighted average
UC	Unified Command
UFC	Unified Facilities Criteria
USDA	U.S. Department of Agriculture
WPL	Worker Population Limit
WPS	Wireless Priority Service
XPA	Extent of Play Agreement

# Appendix D:

## CSEPP Policy Papers

This document incorporates and replaces the CSEPP policy papers developed prior to 2005, and represents updates and modifications to approved Army/FEMA policy papers. Table 10 identifies where the policy papers still in effect in 2005 have been incorporated into this document.

**Table 10: Cross-Reference of All Current Policy Papers**

<b>Policy Paper Number</b>	<b>Paper Title</b>	<b>Referenced at Page # or in other Guidance Document</b>
1	Definition of Maximum Protection  Policy Paper 1 defined the Congressional "Maximum Protection" mandate under Public Law 99-145. This is addressed in the "CSEPP phases" section of Chapter 1.	4
2	Environmental Sampling to Determine Chemical Agent Contamination  Policy Paper 2 established the CSEPP policy on environmental monitoring and sampling in the event that lethal chemical agents are released to the environment. This is addressed in the "Authorities and Responsibilities" section of Chapter 5.	46
3	Not issued	N/A
4	Roles and Responsibilities of Joint Steering Committee Subcommittees	N/A
5	County Public Information Officers for CSEPP	N/A
6	Not issued	N/A

Policy Paper Number	Paper Title	Referenced at Page # or in other Guidance Document
7	Interim Policy Regarding Off-Post Meteorological Towers for CSEPP  This paper is to establish an interim policy regarding off-post meteorological towers ("met towers") for the states participating in CSEPP. The issue is addressed in the "Meteorological Towers" section of Chapter 10.	93-94
8	Review of CSEPP Exercise Initiating Events	N/A
9	Public Information in Connection with CSEPP Exercises  Policy Paper 9 stated that, "It is the position of the CSEPP Public Affairs and Exercise Subcommittee that a proactive public information program be conducted in connection with CSEPP Exercises." Public affairs participation in CSEPP exercises is discussed in the Collaboration and Coordination section of Chapter 13.	121-122 and CSEPP Public Affairs Compendium and Workbook
10	Not issued	N/A
11	Compensation for Volunteer CSEPP Exercise Participants  The description of allowable compensation for exercise volunteers is being relocated to the table addressing allowable and unallowable costs in the CSEPP Cooperative Agreement Guidance.	CA Guidance
12	CSEPP Exercises	N/A
13	Elimination of Dual Exercise Types	N/A
14	Designation of Public Affairs as Core Objective	N/A
15	Off-Post Medical Preparedness Capability  Policy issues pertaining to the CSEPP Exercise Program are addressed in the CSEPP Medical Resource Guide. Chemical Stockpile Emergency Preparedness Program; Department of the Army; Department of Homeland Security, May 29, 2012.	CSEPP Medical Resource Guide, CA Guidance
16	CSEPP Modified Exercise Schedule	N/A
17	Protocols for Communication with Army SBCCOM CSEPP Technical Support Staff  Policy Paper 17 established protocols for the Army to provide information support to the offsite community. This is addressed in the "Technical Support from U.S. Army Chemical Materials Activity" section of Chapter 1.	15

Policy Paper Number	Paper Title	Referenced at Page # or in other Guidance Document
18	CSEPP National Benchmarks  The CSEPP National Benchmarks established through this policy paper are described, briefly, in the “Strategic Plan and Benchmarks” section of Chapter 1. They are discussed in greater detail in the Army/FEMA Strategic Plan.	16-17
19	Community Profile  Policy issues pertaining to the CSEPP Exercise Program are addressed in the Exercise Policy and Guidance for the Chemical Stockpile Emergency Preparedness Program. U.S. Department of the Army and DHS/FEMA. December 2012.	<i>Blue Book</i>
20	Adoption of Acute Exposure Guideline Levels (AEGLs)  This Policy Paper stated that, effective November 2001, CSEPP adopted the “Acute Exposure Guideline Levels (AEGLs)” for chemical warfare agents as published in the Federal Register. This is addressed in the “Acute Exposure Guideline Levels” section of Chapter 2.	25-26
	HQDA CSEPP Termination Policy	N/A
	Joint Memorandum on Integrated Process Teams  Use of Integrated Process teams as a vehicle for Army/FEMA collaborative decision-making is discussed in the “Army/FEMA Coordination” and Integrated Process Teams” section of Chapter 1.	13-14

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