Maximizing Domestic CBRN Response and Recovery Efforts

FEMA Chemical, Biological, Radiological and Nuclear Office| December 16th, 2020

DHS/CISA/Chemical Security Seminar

FEMA

Agenda

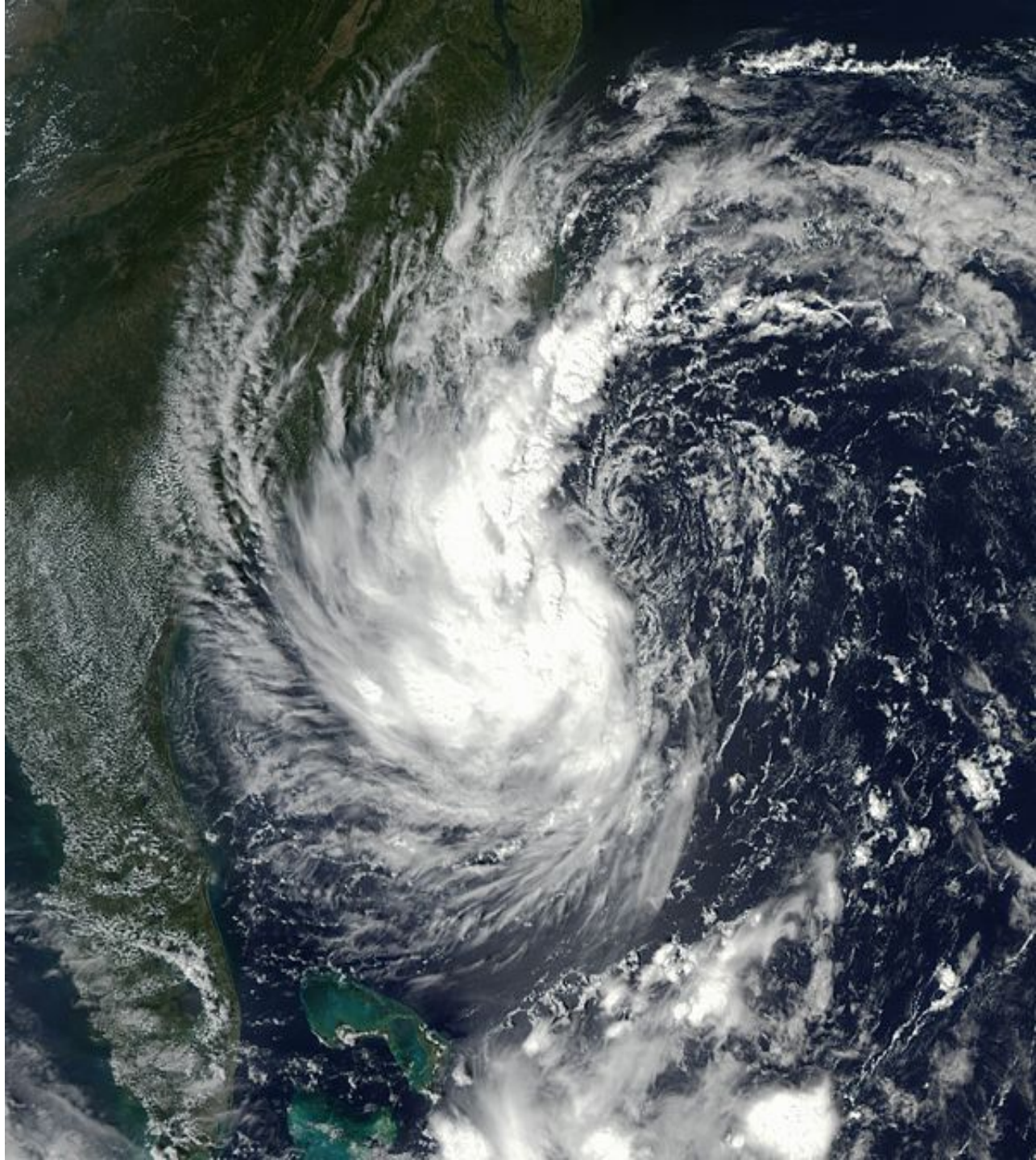
- Overview of the Domestic CBRN Threat/Hazard Environment
- Bridging gaps between CBRN preparedness, prevention and response: FEMA CBRN Office
- FEMA CBRN response capabilities and technology needs
- Q&A

Overview of Domestic CBRN Threats/Hazard Environment

Potential Threat Actors and Vectors

- **Manmade Intentional:** lone wolves, terrorists, nation-states
- **Manmade Unintentional:** technology failures, accidental releases
- **Natural Disaster Induced:** cascading impacts of hurricanes, earthquakes, etc.

FEMA



First Responder Challenges

- Response requires specialized units, equipment, and training
- Mutual aid and multi-agency, multi-jurisdictional interoperability
- Re-examination of traditional response TTPs to address first responder health and safety
- Concurrent broader impact on whole community health and safety

FEMA

Domestic CBRN Planning Considerations

Initially, cause of incident may be undetermined with limited situational awareness.

Impact may cascade nationally, even for a localized event.

Potential for mass casualties and large-scale population displacement.

FEMA

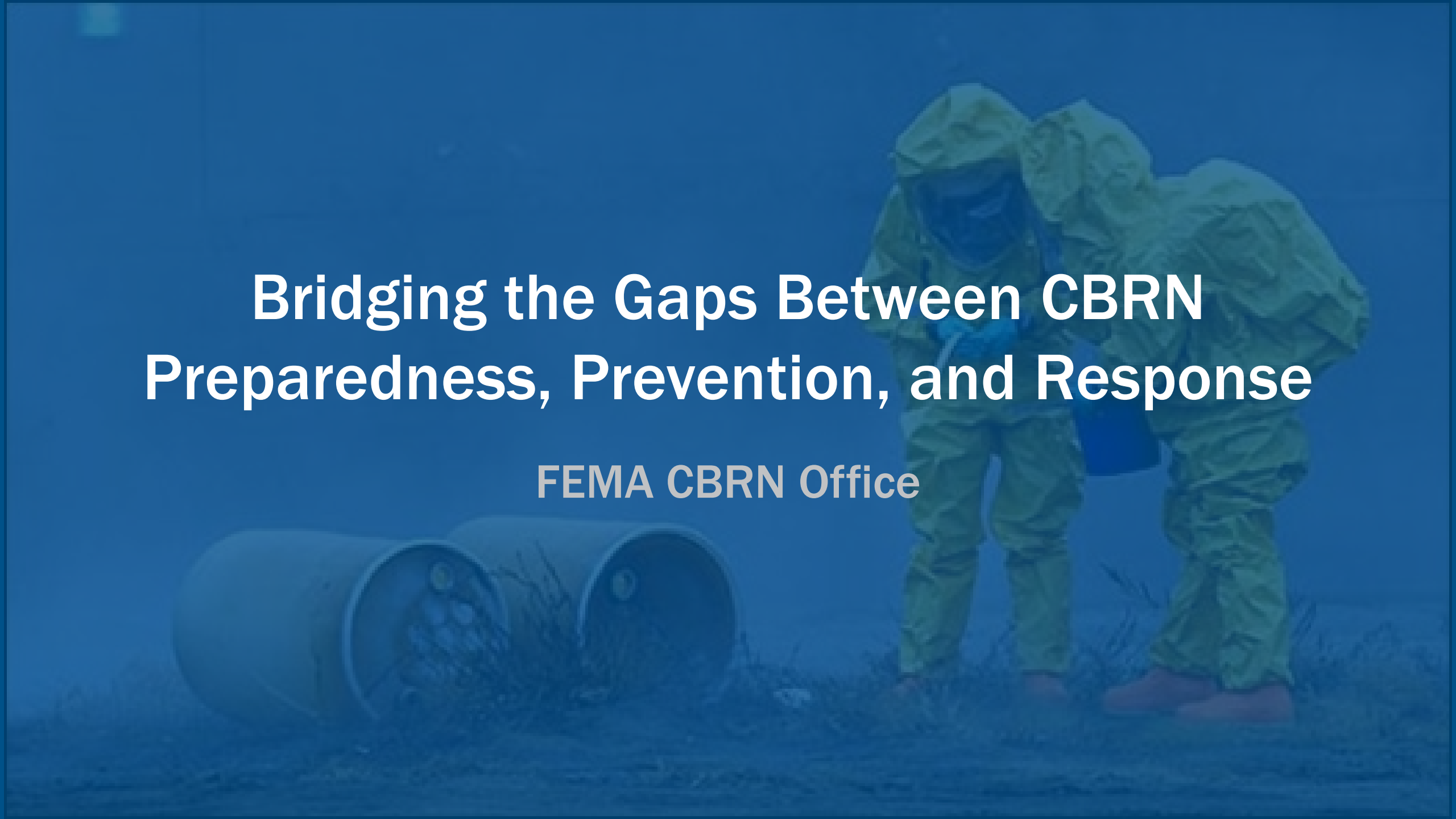
Domestic CBRN Planning Considerations

Existing SLTT capabilities and resources, including specialized response and emergency medical capability, may be overwhelmed, causing significant strain on the whole community

Timely, effective, and coordinated public guidance and messaging, including protective actions guidance, will be paramount.

First responders/receivers may be disproportionately affected depending on the nature of the event.

FEMA



Bridging the Gaps Between CBRN Preparedness, Prevention, and Response

FEMA CBRN Office

FEMA Mission

To help people before, during, and after disasters.

FEMA CBRN Office Mission

Building and deploying capabilities for FSLTT responders that guide and prepare our nation to respond to and recover from a CBRN event.

Implementation Framework

Involves a mutually reinforcing series of strategies, policies, plans, operations, tools, training/exercises partnerships and outreach.

FEMA

POLICY

- Update to the Oil and Chemical Incident Annex
- Chemical Defense Working Group
- Planning Framework for Chemical Incident Consequence Management

Planning

Plans:

- NRF/CBRN Annexes
- NRIA
- BIA
- OCIA
- IAAT – PPD-25
- National/Regional Plans
- City-Specific Plans

Planning tools:

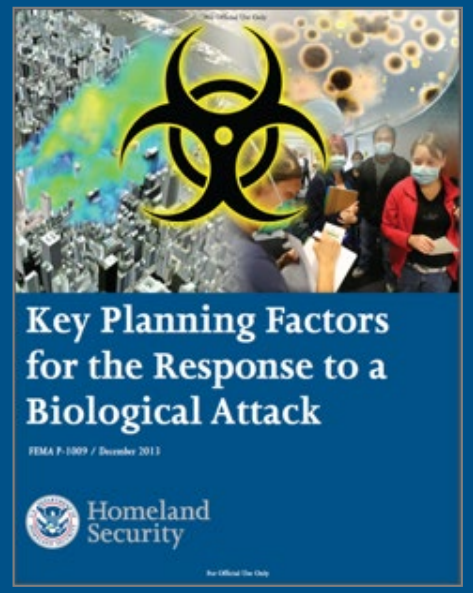
- Key Planning Factors
- City Planning Resource Tools

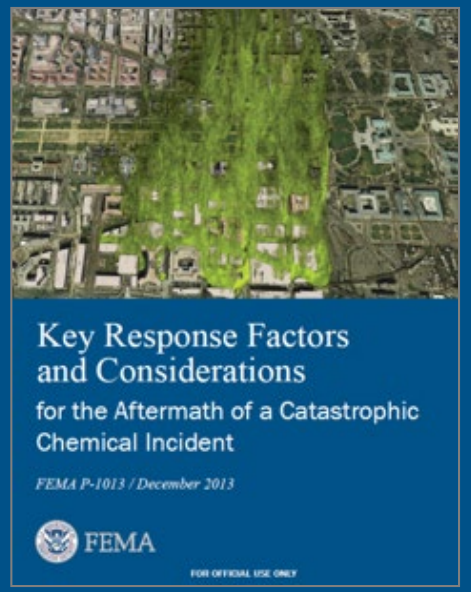
FEMA

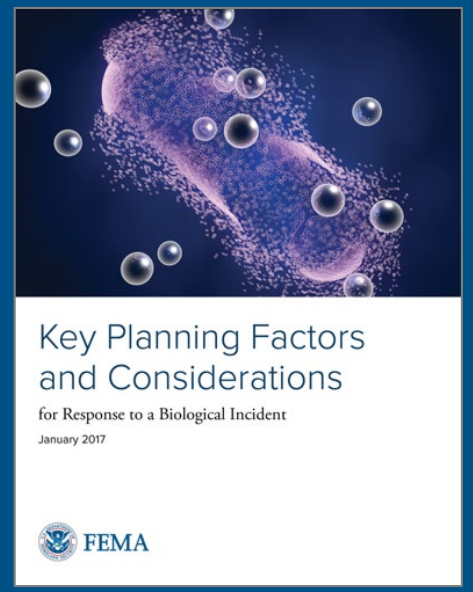
CBRN Key Planning Factors

- Regional response and recovery planners benefit from key planning factors (KPF) and other considerations for CBRN incident response.
- KPF documents and accompanying job aids align to the “Synchronized Operational Areas” described in the CBRN Incident Annexes to the Response and Recovery Federal Interagency Operational Plans (BIA, NRIA, OCIA).
- Include checklists for planning considerations and coordination for regional, state, local, tribal and territorial planners.

FEMA







City Planner Resource (CPR) Tool Suite:

for Federal, State, Local, Tribal, and Territorial Response and Exercise Planners

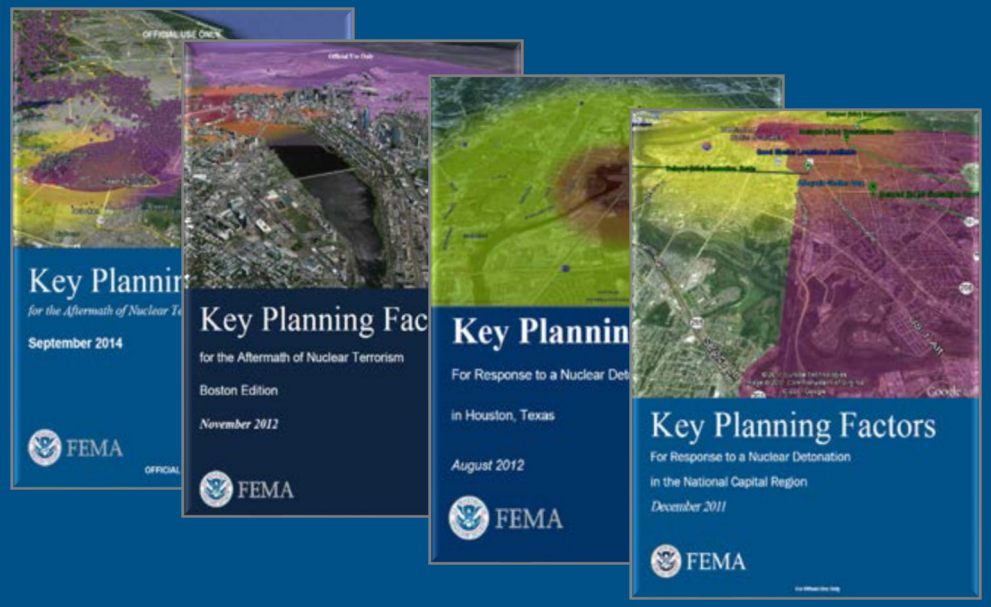
Web-based GIS suite of CBRN planning tools

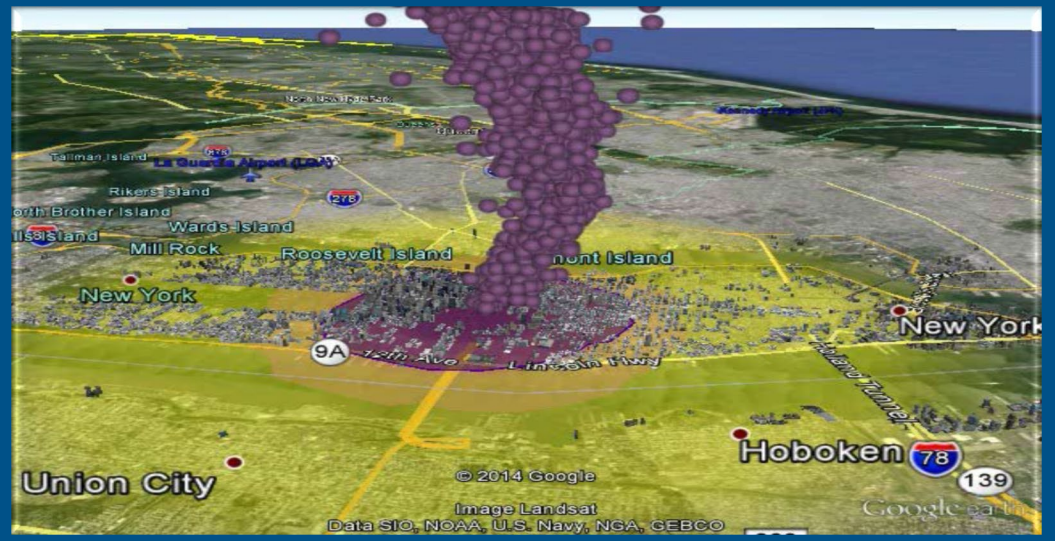
iCPR: IND City Planner Resource – ***beta version complete***

chemCPR: *Chemical City Planner Resource – **in development***

bioCPR: *Biological City Planner Resource – **in development***

- The need for the City Planner Resource Suite evolved out of the Key Planning Factors support provided to all FEMA regions and six cities.
- Supports strategic planning for large scale, high consequence events
- Builds off existing modeling capabilities
- Scenarios that will inform key planning considerations for a response at all levels of government (FSLTT) to save lives
- Provides in-depth contextual information informed through science-based analyses
  - Animations of event progression
  - Buildings, terrain, time and spatially varying weather, and gas density effects
  - Detailed community specific visuals
  - Scenario specific infrastructure impacts
  - GIS files for use in planner's GIS system





FEMA

Operations

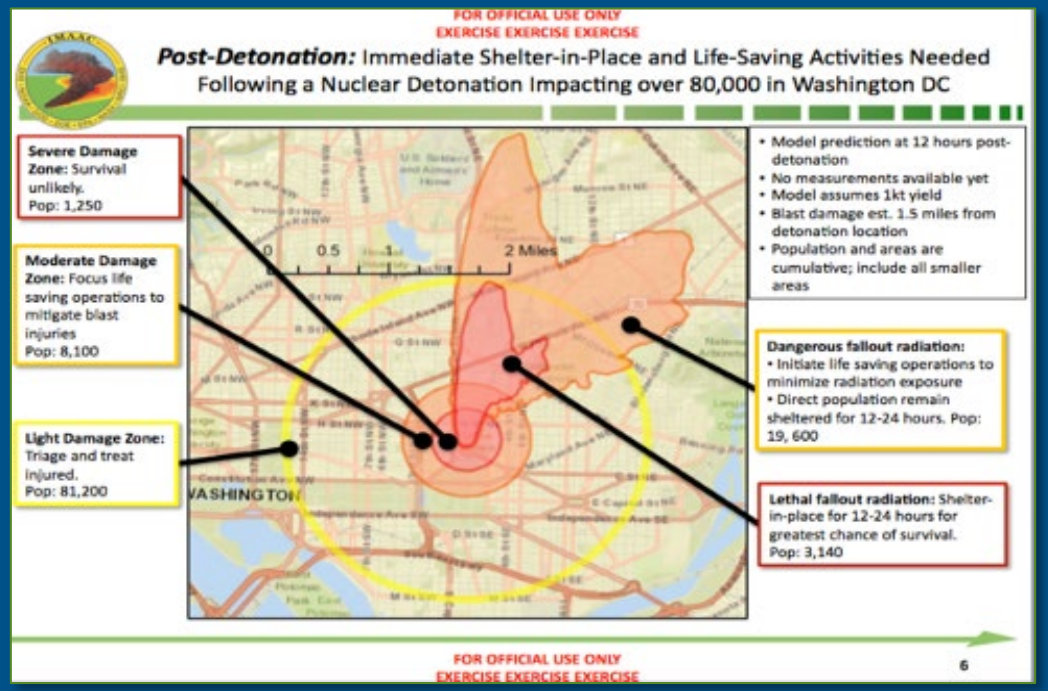
- Consequence Management Coordination Unit (CMCU)
- Domestic Emergency Support Team (DEST)
- Interagency Modeling & Atmospheric Assessment Center (IMAAC)
- Nuclear Incident Response Team (NIRT)

Interagency Modeling & Atmospheric Assessment Center (IMAAC)

MISSION: Provide a single point for the coordination and dissemination of federal dispersion modeling and hazard prediction products that represent the federal position during actual or potential incidents involving hazardous atmospheric releases.

LOCATION: Virtual

FEMA



Decision Products for Senior Leaders

- Tailored for senior leaders for strategic-level impact assessments and to inform public guidance
- Detailed modeling products for first responders and field emergency management officials

IMAAC State & Local Outreach Efforts

Serving:

- FSLTT first responders and decision-makers during actual or potential atmospheric HAZMAT incidents.

Goal:

- Spread awareness of the IMAAC program and capabilities to increase the number of IMAAC activations initiated by first responders.

FEMA

Tools and Standards

CBRN Operational Tools:

- CBRNResponder
- RadResponder Network
- BioResponder
- ChemResponder

Modeling Tools:

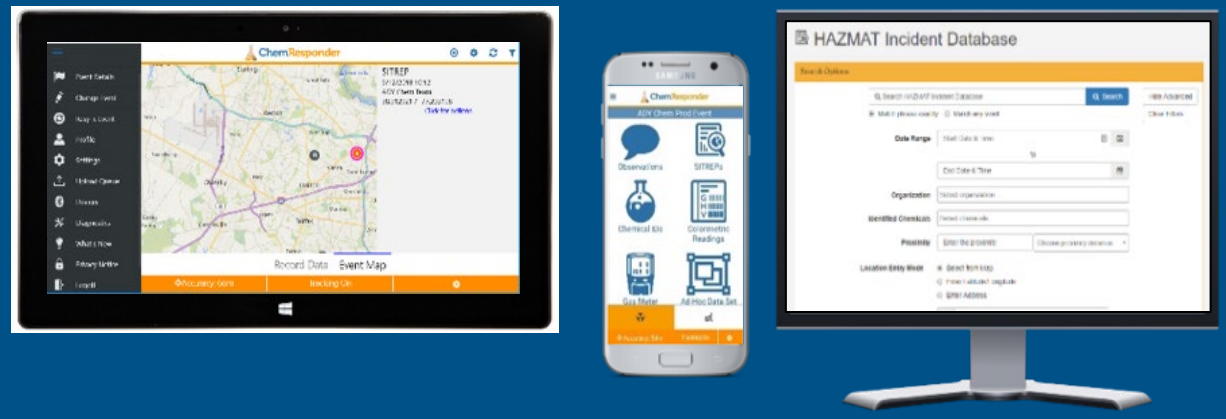
- Rapid Hazard Tool

CBRN Operational Support Specialists:

- Radiological Operations Support Specialist (ROSS)
- Chemical Operations Support Specialist (COSS)
- Biological Operational Support Specialist (BOSS) [pending]

CBRNResponder Network:
ChemResponder

- Provides powerful web-based and mobile platforms with a simple user interface to record, share, and manage hazmat response information and display it in a geospatial environment
- **Goal:** Serve as national standard for hazmat incident management by empowering responders with data collection and sharing capabilities, integrating disparate systems and providing the means for trend analysis and investigations of lessons learned



ChemResponder

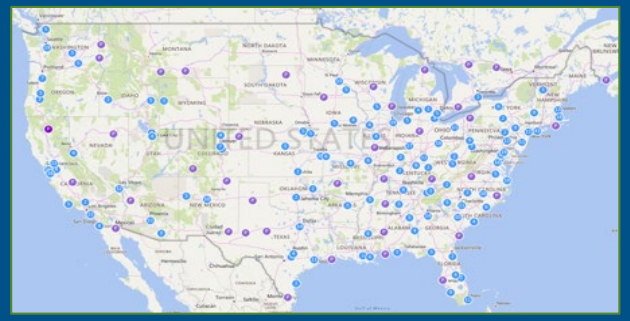
MISSION: A free solution for the collection, management, and sharing of CBRN incident information

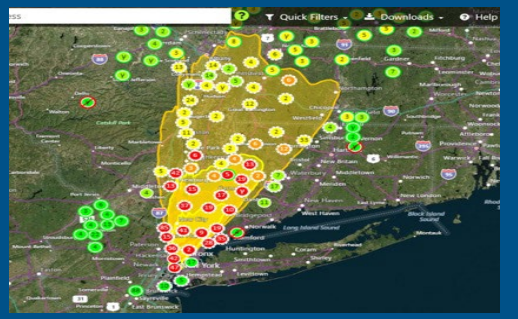
LOCATION: Ubiquitous

FEMA

CBRNResponder Network:
ChemResponder

- **Cloud database:**
  - Responders and teams
  - Equipment
  - Field surveys
  - Samples and analyses
- **Mobile apps:**
  - Collect data
  - Colorimetric results
  - Gas meter readings
- **Web portal:**
  - Data sharing
  - Creating partnerships
  - Mapping/GIS tools
  - Responder tracking
- **Integration efforts:**
  - Fixed sensors
  - Bluetooth equipment
  - Plume models





ChemResponder

RadResponder Network

BioResponder

MISSION: A free solution for the collection, management, and sharing of CBRN incident information

LOCATION: Ubiquitous

FEMA

CBRN Operations Support Specialist (OSS)

- **MISSION:** During hazardous preparedness or response operations, the CBRN OSS identifies and provides critical information to responders, key leaders, and decision-makers. Serves as a state/local subject matter expert (SME) with the ability to bridge the gap between response and CBRN-specific knowledge in order to minimize the impact of a potential or actual incident involving the release of CBRN materials.
- **LOCATION:** SLTT jurisdictions

Established:

Radiological Operations Support Specialist (ROSS)

In Development:

Chemical Operations Support Specialist (COSS)

Exploratory:

Biological Operations Support Specialist (BOSS)
(Being conceptualized based on COVID-19 response lessons learned)

FEMA

Training and Exercises

CBRN Training for:

- NRCC
- IMATs
- CBRN coordinators
- FSLTT partners
- International partners
- Certification of Training at CTOS, CDP and EMI
- International exercises
- National level exercises
- Interagency TTXs
- Regional exercises
- REPP exercises
- CBRN Office drills

Outreach & Coordination

- White House
- International
- Interagency
- DHS components
- FEMA directorates
- Regional CBRN coordinators
- Fusion centers
- WMD coordinators
- EPA
- DOE RAP teams
- Other
- SLTT partners

FEMA

The Future of the FEMA CBRN Office: Enhancing CBRN Response through FSLTT and Industry Partnerships

The Future of the FEMA CBRN Office:

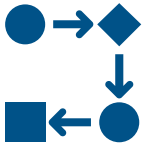
- ✓ Enhancing CBRN Response through FSLTT and Industry Partnerships
- ✓ Offer and expand the availability of our tools and resources
- ✓ Enhance technical, topical, and analytical competence in addressing risks
- ✓ Foster collaboration and partner empowerment
- ✓ Maximize the use of limited whole community resources

FEMA CBRN Response Capabilities and Technology Needs

FEMA CBRN Response Capabilities and Technology Needs

Comprehensive, integrated and multi-jurisdictional (local, regional, national) situational awareness and decision support

High quality, standardized and rapidly accessible data on impacted population, critical infrastructure and capability providers



Visibility into and dynamic interface with global supply chains, particularly regarding medical supplies, equipment, pharmaceuticals and other countermeasures

Strategic integration with private sector, including rapid sharing of event information

FEMA

Questions?

Terrance Allen
Supervisory Emergency Management Specialist
Response Directorate/CBRN Office
Federal Emergency Management Agency
Terrance.l.allen@fema.dhs.gov

Dante J. Stellar
CBRN Program Specialist
Response Directorate/CBRN Office
Federal Emergency Management Agency
Dante.Stellar@fema.dhs.gov

FEMA CBRN Office
Email: fema-cbrnoffice@fema.dhs.gov
Website: fema.gov/about/offices/chemical-biological-radiological-and-nuclear

FEMA