

Joint Effects Model (JEM)

INVESTMENT COMPONENT

Modernization

Recapitalization

Maintenance

MISSION

Provides enhanced operational and tactical-level situational awareness of the battlespace and provides near real-time hazard information before, during, and after an incident to influence and minimize effects on current operations.

DESCRIPTION

Joint Effects Model (JEM) is a web-based software program. It is the only accredited DoD computer-based tactical and operational hazard prediction model capable of providing common representation of chemical, biological, radiological, nuclear (CBRN) and toxic industrial chemicals/toxic industrial material hazard areas and effects. It may be used in two variants: as a standalone system, or as a resident application on host command, control, communications, computers, and intelligence systems. It is capable of modeling hazards in various scenarios, including counterforce, passive defense, accidents, incidents, high-altitude releases, urban environments, building interiors, and human performance degradation.

JEM supports planning to mitigate the effects of weapons of mass destruction and to provide rapid estimates of hazards and effects integrated into the Common Operational Picture.

The planned JEM Increment 2 will address the following targeted capabilities:

- Enhanced modeling to support biological and medical events
- STRATCOM RN requirements
- Urban Dispersion Modeling Improvements
- Modeling CBRN Defense effects of threat Missile Intercept
- Improved Toxic Industrial Material handling
- Improved agent fate predictive modeling
- Access to higher fidelity weather
- Common CBRN Modeling Interface (CCMI)
- Improved CBRN analyst support

JEM interfaces and communicates with the Joint Warning and Reporting Network (JWARN), associated weather systems, intelligence systems and various databases.

SYSTEM INTERDEPENDENCIES

In this Publication

Global Command and Control System Army (GCCS-A), Joint Warning and Reporting Network (JWARN)

Other Major Interdependencies

Global Command and Control System, Joint Tactical Common Operational Picture Workstation (JTCW)/Command and Control Personal Computer (C2PC), Meteorological Data Server

PROGRAM STATUS

- **1QFY12-4QFY12:** Continued Increment 1 deployment

PROJECTED ACTIVITIES

- **2QFY14:** Increment 2 Milestone B
- **4QFY14:** Increment 2 Milestone C

ACQUISITION PHASE

Technology Development

Engineering & Manufacturing Development

Production & Deployment

Operations & Support



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FOREIGN MILITARY SALES
To be determined

CONTRACTORS
Northrop Grumman Mission Systems
(San Diego, CA)

