



U.S. DEPARTMENT OF HOMELAND SECURITY Office of Operations Coordination & Planning

INTERAGENCY MODELING AND ATMOSPHERIC ASSESSMENT CENTER

Overview

- Under the National Response Framework, the mission of the Interagency Modeling and Atmospheric Assessment Center (IMAAC) is to provide a single point for the coordination and dissemination of Federal dispersion modeling and hazard prediction products that represent the Federal position during an actual or potential incident.
- The IMAAC provides plume modeling analyses of the impacts of hazardous atmospheric releases to aid in protecting the public and the environment.
- The IMAAC is led by the Department of Homeland Security (DHS) and supported by seven other federal departments and agencies.
- The Department of Energy's National Atmospheric Release Advisory Center (NARAC) at Lawrence Livermore National Laboratory serves as the operations hub of the IMAAC.

IMAAC Role and Capabilities

Decision makers and first responders need timely and accurate plume predictions to help guide emergency response decisions. IMAAC provides a suite of plume modeling tools that incorporate meteorological, geographic and demographic data, as well as hazardous material information, to predict the transport and potential downwind consequences of biological, chemical, radiological/nuclear, and natural releases. IMAAC experts are available 24/7 to produce detailed quality-assured model predictions, utilize observations and field measurement data to refine analyses, and assist decision makers in product interpretation. Selected users are granted access to a password-controlled IMAAC Web site for sharing analyses and performing automated simulations.

IMAAC Federal Partners



The IMAAC is led by the Department of Homeland Security (DHS) and supported by seven other federal partners:

- Department of Defense (DoD)
- Department of Energy (DOE)
- Department of Health and Human Services (HHS)
- Environmental Protection Agency (EPA)
- National Aeronautics and Space Administration (NASA)
- National Oceanic and Atmospheric Administration (NOAA)
- Nuclear Regulatory Commission (NRC)

The IMAAC's goal is to draw upon the best available capabilities and information from all participating agencies. It is not intended to replace dispersion modeling capabilities that government agencies currently have in place to meet agency-specific requirements.

IMAAC Activation for Emergencies

The IMAAC can be activated by emergency managers and decision makers in local, state and federal agencies for real-world emergencies involving significant hazardous atmospheric releases that exceed local response capabilities. Available information on the nature of the hazardous material and the location, quantity, time, and the mechanism of the release should be provided when requesting IMAAC assistance.

The DHS National Operations Center (NOC) is the primary hub for domestic incident management. For major incidents, the NOC Senior Watch Officer or his/her delegate approves IMAAC activation, prioritizes tasking, and authorizes the distribution of IMAAC plot sets.

IMAAC Response

The IMAAC has responded to numerous real-world events, including chemical fires and train derailments, in-situ burns from the Deepwater Horizon oil spill, and sulfur dioxide volcanic emissions in Hawaii. Once activated, the IMAAC:

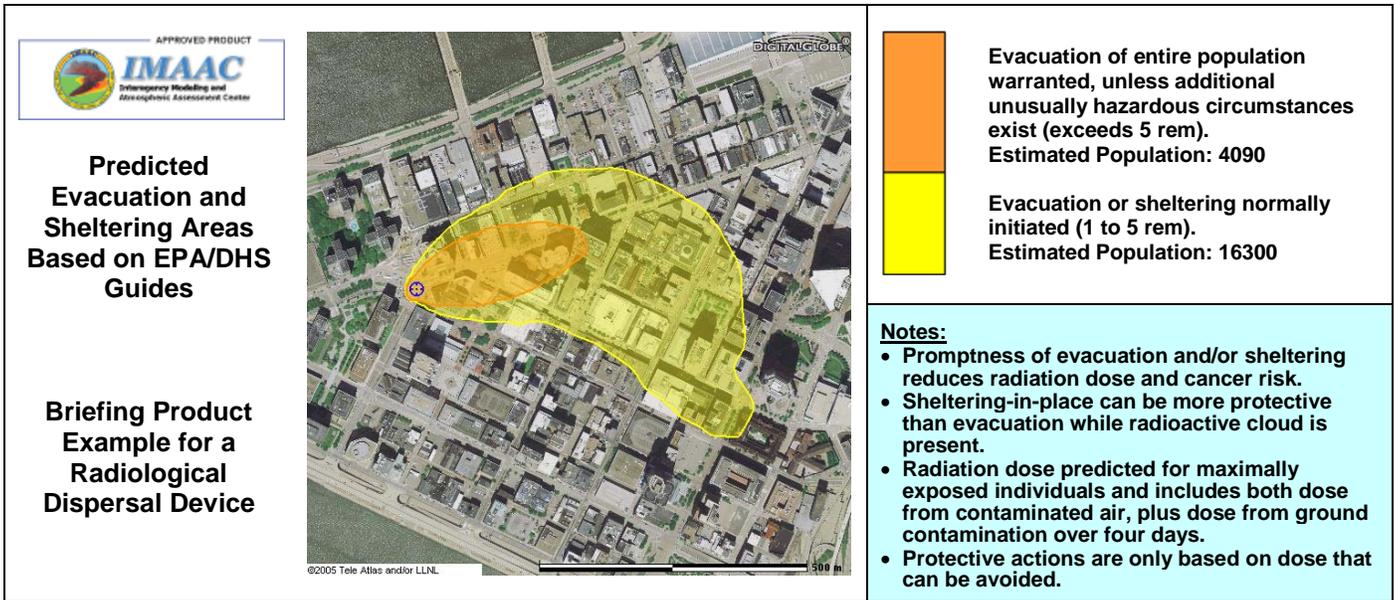
- Collects information on the incident including the time, location, quantity, and type of incident
- Develops model predictions and reports showing health effect and protective action levels
- Refines predictions based on field measurements or other information from the incident scene
- Distributes products and consequence reports to all appropriate parties involved in the response
- Coordinates federal plume modeling and shares incident information

IMAAC Preparedness Activities

IMAAC personnel conduct regular training and outreach activities. The IMAAC participates in the National Exercise Program, supporting national-level and selected agency exercises. The center also is available and may be activated during federally-designated Special Events to respond to specific threats or actual incidents involving a significant hazardous atmospheric release.

IMAAC Analyses

The IMAAC produces both technical analyses and briefing products tailored for communications to non-technical decision makers, developed under an interagency effort (example shown below). IMAAC plots and consequence reports show hazard areas, affected populations, potential casualties and/or fatalities, damage estimates, and health effect, public protective action and worker protection levels. Quality-assured results are indicated by an “Approved Product” notation on the IMAAC logo.



IMAAC Emergency Contact Information

IMAAC Operations (for emergencies only)
 NOC Senior Watch Officer

925-424-6465
 202-282-8101

Contact Information

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