



IMAAC

Interagency Modeling and Atmospheric Assessment Center

Overview

- The IMAAC provides a single point for the coordination and dissemination of Federal atmospheric dispersion modeling and hazard prediction products that represent the Federal position during actual or potential incidents involving hazardous material releases.
- Through plume modeling analysis, the IMAAC provides emergency responders with predictions of hazards associated with atmospheric releases to aid in the decision making process to protect 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 Defense Threat Reduction Agency (DTRA) serves as the Technical 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.

IMAAC Federal Partners

Led by Department of Homeland Security (DHS), the IMAAC is a partnership among eight Federal agencies, each with supporting capabilities and/or responsibilities for plume modeling. These agencies include:

- 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.

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

Access to IMAAC Products

The IMAAC products are available on the Homeland Security Information Network (HSIN) IMAAC page. If you are a local, state, or federal official and require a HSIN IMAAC account, please send an email to IMAACINQUIRIES@hq.dhs.gov for access.

IMAAC Preparedness Activities

IMAAC personnel conduct regular training and outreach activities. The IMAAC also provides atmospheric modeling support for National Level Exercises and local 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 Emergency Contact Information

IMAAC Technical Operations Hub (for emergencies only): **703-767-2003**

Contact Information

For general inquiries, please send an email to imaacinquiries@hq.dhs.gov.