

Interagency Modeling & Atmospheric Assessment Center

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Security

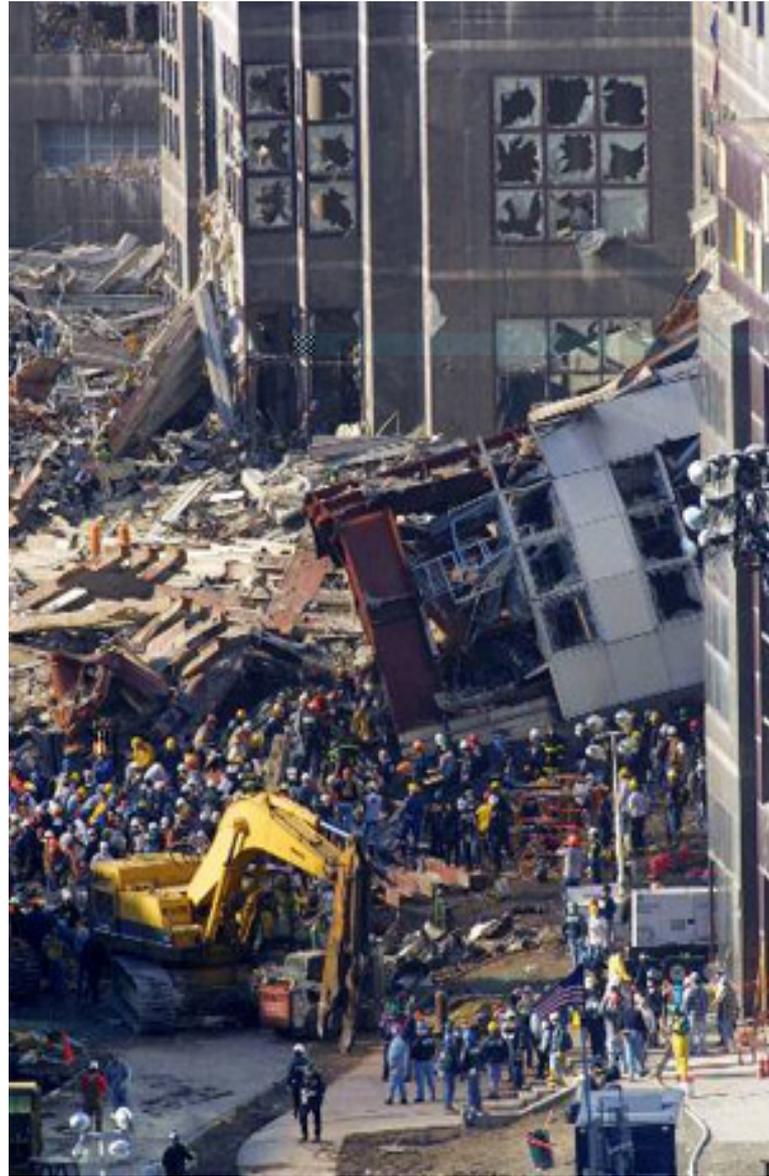
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Science & Technology Directorate



Whatever the situation -
emergency responders
are there first.



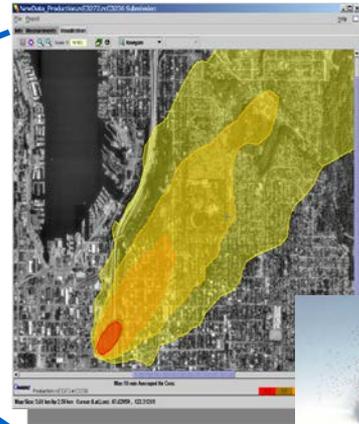
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Helping them to be more effective.....



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....is the mission of the Department of Homeland Security



What?

When?

Where?

How Much?



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DHS can't do it alone



Department of Homeland Security
Federal Emergency Management Agency

U.S. Fire Administration
Working for a Fire Safe America



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Background

- There is a broad range of capabilities for atmospheric hazards predictions throughout the federal government
- The complexity and diversity of resources applied to atmospheric hazards predictions often leads to confusing and inconsistent actions by emergency responders and government officials
- HSPD-5 clarified the role of the Department of Homeland Security as the coordinator of all federal assets for domestic “incidents of national significance”
- TOPOFF-2 and other exercises have amplified the need for an integrated and coordinated approach for atmospheric hazard predictions



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Consequence Management Subgroup

- **Issue:** How can DHS effectively organize federal response assets to efficiently provide atmospheric transport and dispersion modeling results to Federal, State, and Local responders
- **CMWG Charter:** To develop a mechanism for coordinating the production, sharing and analysis of atmospheric transport and dispersion modeling results with the goal of developing a single prediction that will be provided to DHS leadership and other federal agencies, as well as state and local emergency managers



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Interagency Modeling & Atmospheric Assessment Center (IMAAC)

- Integrates the best and brightest scientific capability with the vast emergency response capacity of the federal government
- Distributes atmospheric hazard predictions to federal, state, and local response agencies to assure a common operating picture
- Provides expert interpretation of results to federal, state, and local government, especially DHS HSOC and FEMA NEOC
- Eliminates confusing and conflicting hazard predictions



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Making our Nation safer and more resilient to attack

Key Elements of the Implementation Strategy

- Interagency Modeling and Assessment Center will be created under DHS leadership with an interagency steering committee
- Center will be built on a strong scientific infrastructure
- Center will provide 24/7 operational support
- Center will produce & distribute atmospheric hazard predictions to federal, state, and local response agencies
- Cost effective execution is imperative for long term sustainability



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IMAAC Operational Challenge

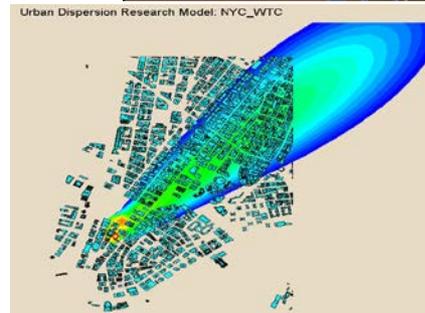
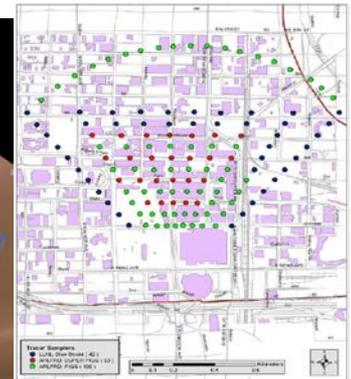
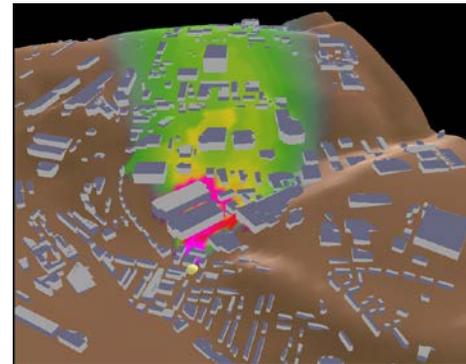
- Diverse user needs and response timescales
- Real-time and archived meteorological data requirements
- Exercise & planning support
- Production and distribution of products
- Classification and Connectivity
- 24/7 surge capacity
- Subject matter expertise
- Cost effective implementation



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IMAAC Scientific Challenge

- Sensor placement and sensor fusion
 - High value assets
 - Wide-Area monitoring
 - Special events
 - Agricultural assets
- Understanding complex urban environments
 - Wind, turbulence & dispersion inside cities
 - Building infiltration
- Modeling & prediction to support incident characterization
- Validation & field characterization



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Current Status

- Interim capability operational – National Atmospheric Release Advisory Center at LLNL
- Connectivity to Homeland Security Operations Center and National Emergency Operations Center established
- Product distribution via web interface to federal, state and local
- IMAAC working group is developing Memorandum of Agreement and Concept of Operations Plan for long term implementation
- DHS will formulate a scientific advisory group to develop long term research and development priorities



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THANK YOU



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