



Multi-Agency Cooperative Modeling

Multimedia Modeling: The Future of Exposure and Risk Assessment

What's in a model?

A multimedia assessment model can be described as being like a bookcase for storing, accessing, and processing large volumes of information that can be used to solve problems. Creating a multimedia environmental assessment model requires the cooperation of scientists and engineers from many disciplines. Increasingly, models are assembled using open-architectural, object-

oriented software frameworks providing plug and play exposure and risk assessment access. It is easy to re-use components from this type of model when creating new models. When research groups with common goals embark on a cooperative effort, they can pool their multimedia modeling tools and the expertise of their scientists and engineers in the development of mutually beneficial exposure and risk analysis tools.



Research Objective

Six federal agencies are cooperating to pursue a common technology in multimedia modeling. The agencies are exchanging and comparing existing environmental models, software, and related databases with the goals of reducing redundancy, facilitating cooperation and coordination, and leveraging expertise. Ultimately, the agencies seek to create a common set of multimedia modeling tools for environmental risk assessment. The common set of tools can be used to develop and apply a wide variety of software modules, data processing tools, and uncertainty assessment approaches. These can be used for understanding and predicting contaminant fate and transport processes and the impacts of chemical and non-chemical stressors on human and ecological health.

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Benefits

- Ⓒ Promotes consistency across Government.
- Ⓒ Creates a cooperative effort that reduces redundancy, leverages expertise, and provides cost savings for Government research groups that share common goals.
- Ⓒ Assures high quality assurance and control procedures in multimedia modeling.

Purpose

- Ⓒ Supports the EPA's goal of sound science and greater innovation to address environmental problems.

Participants

- Ⓒ U.S. Nuclear Regulatory Commission (NRC), Office of Regulatory Research.
- U.S. Environmental Protection Agency (EPA), Office of Research and Development, National Exposure Research Laboratory.
- U.S. Army Corps of Engineers (COE), Engineer Research and Development Center.
- U.S. Department of Energy (DOE), Office of Science and Technology.
- U.S. Department of Interior (DOI), U.S. Geological Survey (USGS).
- U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS).



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