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# Interagency Steering Committee On Multimedia Environmental Modeling (ISCMEM)

## **Memorandum of Understanding** Among

THE UNITED STATES NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REGULATORY RESEARCH

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF RESEARCH AND DEVELOPMENT

THE UNITED STATES DEPARTMENT OF DEFENSE  
ARMY CORPS OF ENGINEERS  
ENGINEER RESEARCH AND DEVELOPMENT CENTER

THE UNITED STATES DEPARTMENT OF ENERGY  
OFFICE OF ENVIRONMENTAL MANAGEMENT

THE UNITED STATES DEPARTMENT OF THE INTERIOR  
UNITED STATES GEOLOGICAL SURVEY

THE NATIONAL SCIENCE FOUNDATION  
GEOSCIENCES DIRECTORATE

## **I. Purpose**

**a.** The purpose of this Memorandum of Understanding (MOU) is to continue and strengthen a framework for facilitating cooperation and coordination among the United States Nuclear Regulatory Commission (NRC), Office of Nuclear Regulatory Research (RES); the United States Environmental Protection Agency (EPA), Office of Research and Development (ORD); the United States Department of Defense, Army Corps of Engineers (COE), Engineer Research and Development Center (ERDC); the United States Department of Energy (DOE), Office of Environmental Management (EM); the United States Department of the Interior (DOI), United States Geological Survey (USGS); the National Science Foundation (NSF), Geosciences Directorate (collectively, the “cooperating Federal agencies”) in research and development (R&D) of multimedia environmental models, software and related databases, including development, enhancements, applications and assessments of site-specific, generic, and process-oriented multimedia environmental models as they pertain to human and environmental health risk assessment. This MOU does not include agency work directly in support of licensing activities.

**b.** This MOU is intended to provide a mechanism for the cooperating Federal Agencies to pursue a common technology in multimedia environmental modeling with a shared scientific basis.

**c.** This MOU is intended to reduce redundancies and improve the common technology through exchange and comparisons of multimedia environmental models, software and related databases. By entering into this MOU, the cooperating Federal Agencies seek mutual benefit from their respective R&D programs related to multimedia environmental model development and enhancement activities, and seek to encourage and ensure effective exchange of information between their technical staff and contractors. The R&D programs referred to in this MOU include development and field applications of a wide variety of software modules, data processing tools, and uncertainty assessment approaches for understanding and predicting contaminant transport processes including the impact of chemical and non-chemical stressors on human and ecological health.

**d.** This MOU focuses on exchanging information related to multimedia environmental modeling tools and supporting scientific information for environmental risk assessments, joint efforts to improve the scientific basis for implementing multimedia environmental models, protocols for establishing linkages between disparate databases and models, review and endorsement of multi-agency projects that advance the science of multimedia environmental modeling, and development and use of a common model-data framework.

**e.** This MOU is intended to facilitate the establishment of working partnerships among the cooperating Federal Agencies' technical staff and designated contractors in order to enhance productivity and mutual benefit through collaboration on mutually-defined research studies such as the development of a common model-data framework.

**f.** A proposal has been made to change the name of the Interagency Steering Committee on Multimedia Environmental Models (acronym: ISCMEM) to the Integrated Environmental Modeling and Monitoring Steering Committee, to be referred to as the IEMM Steering

Committee. Should the proposal be adopted at the next ISCMEM Annual Meeting, the present MOU will apply for all matters to the newly named Steering Committee.

## **II. Authorities**

Nothing in this MOU will be construed to alter the statutory authorities and/or limitations of the cooperating Federal Agencies. The authorities for NRC to enter into this MOU are Section 205 of the Energy Reorganization Act of 1974 (42 U.S.C. § 5845) and the Economy Act of 1932 as amended (31 U.S.C. § 1535). The authorities for DOE to enter into this MOU are sections 646(a), 102(11) and 102(13) of the Department of Energy Organization Act of 1977 (42 U.S.C. §§ 7256(a), 7112(11), and (13), respectively). The authority for the COE-ERDC to enter into the MOU is DoD Instruction 4000.19 “Interservice and Intragovernmental Support.” The legal authorities for the USGS to enter into this MOU are the Organic Act of March 3, 1879, as amended (43 U.S.C. § 31 *et seq.*) and the authority which allows the USGS to prosecute projects in cooperation with other Federal, State or private agencies (43 U.S.C. § 36). The legal authority for the NSF to enter into the MOU is the National Science Foundation Act (42 U.S.C. § 1861 *et seq.*), and Pub. L. No. 88-426 as amended and codified. The authorities for the EPA to enter into this MOU are Section 103(b)(2) of the Clean Air Act (42 U.S.C. § 7403(b)(2)), Section 104(b)(2) of the Clean Water Act (33 U.S.C. § 1254(b)(2)), Section 20 of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. § 136), Section 10 of the Toxic Substances Control Act (15 U.S.C. § 2709), and Section 8001 of the Resource Conservation and Recovery Act (42 U.S.C. § 6981). The legal authority for the other cooperating Federal Agencies to enter into this MOU is also the Economy Act of 1932, as amended (31 U.S.C. § 1535). This MOU does not supersede or void existing memoranda of understanding or other agreements among the cooperating Federal Agencies.

## **III. Responsibilities**

The cooperating Federal Agencies agree to:

**a.** Designate staff-level points of contact for the cooperating Federal Agencies. For the NRC, the staff-level point of contact will be at NRC Headquarters, within the Office of Nuclear Regulatory Research. For EPA, the staff-level point of contact will be within the Office of Research and Development. For COE, the staff-level point of contact will be from within the Environmental Processes and Engineering Division, Environmental Laboratory. For DOE, the staff-level points of contact will be with the Office of Environmental Management. For USGS, the staff-level point of contact will be within the Water Mission's National Research Program. For NSF the staff-level point of contact will be within the Engineering Directorate. The designated points of contact will promote technical coordination, identify joint R&D programs of mutual interest for the Federal Agencies and funding for such programs, and will assist in arranging for supplemental interagency agreements for R&D projects on multimedia environmental models, software and related databases at appropriate sites and laboratories.

The designated points of contact also intend to facilitate the coordination and exchange of R&D data and technical information related to environmental risk assessment modeling among the

cooperating Federal Agencies. They intend to represent their individual agency's R&D programs and facilities conducting R&D as it pertains to modeling of human and ecological health impacts.

The designated points of contact are to be responsible only for research activities and technical information exchanges identified in this MOU and not those directly in support of licensing activities.

The cooperating Federal Agencies further agree that the designated points of contact are to serve as members of ISCMEM. Alternates may be designated by the Federal Agencies to represent specific technical interests. The purpose of this committee is to coordinate joint research efforts under this MOU. The committee is to meet at least quarterly or more frequently as determined by the Steering Committee either via teleconference call or at a designated meeting place. At least one of these quarterly meetings is to be a public meeting at a designated meeting place as determined by the Steering Committee members. Participation in technical working groups established by the Steering Committee, and at technical meetings called by the Steering Committee, will be determined by the cooperating Federal Agencies. Organizational details regarding the steering committee, agency representatives and technical working groups are outlined below.

**b.** Participate in selected R&D programs of the other cooperating Federal Agencies by providing resources, information and technical expertise for review (outside of the conventional research peer review process) or consultation in areas of multimedia environmental model development, enhancements, applications, and assessments subject to program priorities and budget constraints.

**c.** Support the exchange of technical information through databases, information systems, clearinghouses, conferences, workshops, activities for developing a common model-data framework, collaboration on scientific projects supporting the modeling framework, and other means pertaining to multimedia model development, enhancements and applications focusing on environmental risk assessments, subject to program priorities and budget constraints.

**d.** Support approved research at selected sites by providing services, facilities, utilities and other supporting resources as appropriate and subject to program priorities and budget constraints. Details of such support will be more specifically identified in supplemental interagency agreements (IA's) prepared in accordance with applicable requirements, and subject to the availability of funds. Nothing in this MOU, in and of itself, obligates Federal Agencies to expend appropriations or to enter into any contract, assistance agreement, interagency agreement, or incur other financial obligations.

**e.** Support competitive research solicitations jointly funded by member organizations, depending on interest and availability of funds. Priority research topics are to be collaboratively selected by participating Agencies. Eligible entities may include institutions of higher learning, not-for-profit institutions, and tribal, local, state and Federal governments. All proposals are to undergo external peer review and final selections are to be made by each Agency to reflect relevancy to its respective mission.

**f.** Develop specific IA's among the cooperating Federal Agencies pursuant to this MOU whenever appropriate to define specific undertakings. Such IA's may provide for cooperative projects, or other efforts deemed appropriate, subject to applicable laws and regulations pertaining to the respective agencies and the availability of funds.

Details of support for specific cooperative work including funding, project plans, designation of cooperative work, and details of program management and execution would be contained in the IA's. The cooperating Federal Agencies' program officials are to communicate directly with one another during the planning and execution of these IA's.

#### **IV. Administration**

It is the policy of the cooperating Federal Agencies to make the results of the R&D work contemplated by this MOU available to the public consistent with applicable security and other applicable regulations.

**a.** Technology transfer: The participating Federal Agencies intend to establish procedures for sharing multimedia environmental models, software, related databases and supporting scientific information with the other cooperating Federal Agencies. The participating Federal Agencies have statutory authority through the Federal Technology Transfer Act of 1986, as amended and codified at 15 U.S.C. §3701, et seq. to conduct technology transfer activities. Since the Federal Agencies may have specific patent and data policies regarding inventions and data funded in whole or in part by the Federal Government, the policies of the agency conducting the work shall apply to agreements executed between the parties to the MOU as well as to contracts they are under where such agreements or contracts are funded in whole or in part by the cooperating Federal Agencies. The cooperating Federal Agencies shall attempt to resolve any conflicts in their patent and data policies on a case-by-case basis when they enter into implementing IA's. In all other circumstances it is agreed that the governing patent and data policies will be determined in accordance with the policy of the sponsoring agency.

**b.** Information release: All data and information originating from these cooperative research studies is to be published and made available to the public as required by law through the cooperating Federal Agencies' requirements and described in their public information and publishing procedures. This information and data will not be disseminated to anyone, except the cooperating Federal Agencies, until such time as it is made available to the public by the originating Federal Agency. All requests for information and data under the Freedom of Information Act will be referred to the originating Federal Agency for processing as described in paragraph (e). The parties will seek to ensure that their contractors will disseminate such information in accordance with this agreement and the cooperating Federal Agencies' procedures. The cooperating Federal Agencies agree to share any press releases or other public affairs information related to joint efforts or projects for review and concurrence prior to release.

**c.** Financial policy: It is recognized that the cooperating Federal Agencies have specific statutory requirements and limitations that dictate their financial policies. Therefore, the cooperating Federal Agencies agree to consider and specifically to address the financial policies to be applied

to each project under the authority of this MOU as a term of the individual IA's detailing each such R&D project.

**d. Program funding:** Although this MOU is neither a fiscal nor a funds obligating document, each cooperating Federal Agency intend to seek to ensure sufficient funding via IAs to carry out projects that are mutually agreed upon as a result of this MOU. The details of the levels of funding to be furnished to one agency by the others are to be developed in specific IA's. The cooperating Federal Agencies are to provide mutual support in budget justifications to the Office of Management and Budget and in hearings before Congress with respect to programs on which they collaborate. The cooperating Federal Agencies agree that this MOU does not involve the exchange of funds, and further that any correlated IA's entered by two or more of the cooperating Agencies will be subject to the availability of funds appropriated by the Congress for such purposes.

**e. Public information coordination:** Disclosure of information to the public regarding projects and programs implemented under this MOU will be made in accordance with the Freedom of Information Act (5 U.S.C. § 552) and other applicable law and regulations. Consultation among the cooperating Federal Agencies' representatives will occur consistent with applicable law.

**f. Amendment and termination:** This MOU may be modified and amended by written agreement among the cooperating Federal Agencies or terminated by mutual written agreement of the cooperating Federal Agencies. An individual agency may withdraw from the MOU upon 90-day written notice to the other agencies. Additional Federal agencies may become parties to this MOU by petitioning the Steering Committee and signing an Addendum to the MOU. The Addendum will commit the new Federal cooperating organization to assume the obligations and rights of MOU membership as specified in this MOU. The parties to the MOU agree to delegate to the Steering Committee the authority to review requests for MOU membership, and to approve additional parties. The Steering Committee Chair will sign the requester's Addendum to indicate approval of the agencies that are parties to this MOU.

**g. Quality assurance:** An important goal of the MOU and subsequent IA's is high- quality research and modeling products. The cooperating Federal Agencies commit to following their established quality assurance (QA) and quality control (QC) procedures in the development and use of these research and modeling products. Specific QA/QC issues are to be resolved during the development of the specific IA's.

**h. ISCMEM website:** The information exchange and collaborative efforts which are the objectives of this MOU can be substantially enhanced through the evolving use of internet based resources. Internet-based outreach to the public is to be facilitated via the ISCMEM website such as might be developed or provided access to through member agency resources. Notwithstanding the Steering Committee's role, this MOU is not intended to make any resource commitments without each agency's approval.

**i. Limitations to applicability:** This MOU does not create any right or benefit, substantive or procedural, enforceable by law or equity, by persons who are not party to this agreement, against any Federal Agency, their officers or employees, or any other person. This MOU does not direct or apply to any person outside any Federal Agency.

## **V. Organization**

### **a. Steering Committee**

The steering committee is composed of representatives from each participating agency as established in Section IIIa of this MOU. Upon activation of the MOU, the steering committee will elect a committee chair to serve for a period of one year. A vice chair is also to be elected by steering committee members and will assist and succeed the current Chair after the one year period of service. Thereafter, a new vice chair is to be elected annually to assist and succeed the current Chair. The Chair will be responsible for coordinating/consolidating future directions for ISCMEM activities in consultation with the steering committee members, setting the agenda for steering committee meetings, recording the minutes of each meeting, disseminating ISCMEM information, organizing an annual public meeting of the steering committee, coordinating committee business in the formation of new working groups, and representing (and advocating for) ISCMEM at all levels of government. The vice chair is to assist in all of these tasks.

Agency representatives on the steering committee are tasked with identifying specific areas of collaboration among the participating agencies within ISCMEM and for representing ISCMEM projects to their own agencies. Agency representatives are to prioritize, prepare written descriptions of and vote on the establishment of working groups/projects to be included in the ISCMEM portfolio and/or realignment/dissolution of existing working groups/projects. Agency representatives are to serve as points of contact, if not active members, of working groups/projects established by the steering committee. This ensures communication between working groups/projects and the steering committee. An important role of the Agency representative is to act as a liaison between the members of the workgroups and the administration of their respective agencies. In this role, they provide a conduit of communication for the needs identified by members of the workgroups to the agency hierarchy.

Funding via IAs of ISCMEM-related activities such as workshops, meetings, publications, travel support and expenses related to ISCMEM projects is not mandated by this MOU and will be subject to individual agency missions, legal authorities, and availability of funds.

Joint solicitations for mutually beneficial interagency activities will also be subject to individual agency interests and funding availability. Joint solicitations will be for competitive projects in areas of mutual interest. One agency within ISCMEM is to take a leading role in posting the solicitation and conducting peer reviews of proposals, with ISCMEM support. Agency representatives on the steering committee then intend to select from among the favorably reviewed proposals those projects that most align with individual agency missions for funding. These projects are then to be managed by the funding agency.

The voluntary nature of funding ISCMEM activities, whether by IAs or joint solicitations, requires that the agency representatives be advocates for ISCMEM within their own agencies and promote those ISCMEM-related, interagency activities that are of mutual benefit to ISCMEM members and the Federal Government in general.

### **b. Working Groups/Projects**

ISCMEM intends to accomplish specific mutually beneficial activities via the establishment of working groups and/or specific projects. All potential working groups/projects are to be presented to the steering committee via an agency representative or by invitation by the committee. For the establishment of working group activities this presentation is to take the form of a Phase I proposal that will be considered by the steering committee for approval. Phase I proposals are to outline the objective of the working group, a leader and co-leader of the effort, its relevance to the participating ISCMEM agencies and alignment with ISCMEM goals. If approved by a majority vote of the steering committee, a Phase II proposal is to be solicited from the working group lead outlining in more detail the objectives of the working group, activity plans, working group membership (including a steering committee contact), timeline (including regular meeting schedules), resource estimate, and potential products. The Phase II proposal is also to be considered and voted on by the steering committee.

Specific projects of interest to ISCMEM member agencies are to follow a similar approval path within ISCMEM. However, given that some specific projects are likely to be “moments of opportunity” and of shorter time duration than working groups, a Phase II proposal process may be waived at the steering committee’s discretion upon receipt of a sufficiently detailed Phase I proposal.

#### **c. ISCMEM Products**

All working groups/projects are to report on their activities as requested by the ISCMEM Chair at quarterly ISCMEM meetings/teleconferences. Working group/project proposals will be made publicly available on the ISCMEM website.

#### **d. Changes**

Changes and/or updates to ISCMEM organizational and operating procedures can be implemented by a majority vote among Steering committee members.

## **VI. Signatures**

Effective date: This MOU for ISCMEM will become effective upon the signature of four Federal Agencies. Official participation on the Steering Committee will be limited to those agencies that have confirmed their intent to participate by signing this MOU. Any of the currently participating agencies that re-sign will be accepted as if they had signed before expiration of the original MOU and will not be required to follow the procedures specified in Section IV(f). Agencies not currently participating can become participants by following the procedure outlined in Section IV(f). This MOU will remain effective for five years from the date of the fourth signature or until modified or terminated by mutual consent.

<i>/signed/</i>	6/7/16
<hr/> Michael F. Weber Director of Nuclear Regulatory Research U.S. Nuclear Regulatory Commission	<hr/> Date
<i>/signed/</i>	7/7/2016
<hr/> Thomas A. Burke, Ph.D. Deputy Assistant Administrator Office of Research and Development U.S. Environmental Protection Agency	<hr/> Date
<i>/signed/</i>	9/19/2016
<hr/> Jeffrey P. Holland, Ph.D., P.E. Director U.S. Army Engineer Research and Development Center U.S. Army Corps of Engineers	<hr/> Date
<i>/signed/</i>	6/27/2016
<hr/> Frank Marcinowski Acting Associate Principal Deputy Assistant Secretary for Environmental Management U.S. Department of Energy	<hr/> Date
<i>/signed/</i>	6/8/2016
<hr/> Donald W. Cline, Ph.D. Associate Director for Water U.S. Geological Survey U.S. Department of Interior	<hr/> Date
<i>/signed/</i>	5/31/2016
<hr/> Roger Wakimoto Assistant Director Directorate for Geosciences U.S. National Science Foundation	<hr/> Date