From: FEMA-MDWG

To: Firoved, Aaron; Klein, Adam; Lard, Adriana; Tucker, Adrienne; Scheuer, Amy; Janca, Andrew; O"Neil, Andrew; Savage, Annie; Macintyre, Anthony; Zohn, Ashley; Ruiz, Benigno; Boyer, Bill; Dickerson, Bradley; Bolinski, Brandon; Maycock, Brett; Beisheim, Brian; Montemayor, Bruce; Canzler, Erica; Council, Chad; Faber, Chad; Gorman, Chad; Wood, Chad; D"Angona, Chelsea; Dettmann, Christianne; Finch, Christina; Penney, Christopher; Vaughan, Christopher; Wolney, Christopher; Thomas, Claire; Hale, Clay; Brown, Cliff; Levy, Craig; Blumenthal, Daniel; Cotter, Daniel; Alexander, David; Kang, David; Ritchie, David; Warren, David; Criswell, Deanne; Villoch, Deborah; dillon7@llnl.gov; Rooney, Edward; Koren, Elizabeth; Meyer, Emily; Berman, Eric; Rollison, Eric; Soucie, Eric; Edwards, Erin; FEMA-CrisisPlans; FEMA-GEO; FEMA-MOTF; White, Gerald; Bennett, Gerilee; Joseph, Grady; Wilson, Gregory P; Longenecker, Herbert; Hardy, James J; Rozelle, Jesse; Quintanilla, Jessica; Ingargiola, John; Juskie, John; Hoyes, Jonathan; Nelms, Jordan; Gil Montanez, Jose; Ignacio, Joselito; Dozor, Joshua; King, Joshua; Moline, Julia; Legary, Justin; Buckley, Kara; Woodhams, Katrina; Holtermann, Keith; Bronowicz, Kelly; Blunt, Kenyetta; Briggs, Kevin; Souza, Kevin; Pettit, Kimberly; Gilmore, Lance; Tomic, Leslie; Lowe, Lynda; Foley, Lori; Campbell, Matt; Grimm, Michael; Vineyard, Micheal; Walter, Michael; Shafer, Michelle; Brierley, Mickey; Hinkson, Natasha; Jawaid, Naveen; NOAA-LNO; Sacbibit, Rick; Huang, Paul; Peter Roohr; Mcnamee, Shannon; Newman, Stephen; Irwin, William (OGA); Hittle, Garrett; Sobel, Seth (CTR); Lakey, Mike N CTR; Luik, Jennifer L LCDR; bkjones@usgs.gov; Jaeger, Pamela; Rudzinsky, Marilyn; Orr, Marilee; blantz@esri.com; Oconnor, Desta; Werner, Matthew; Brister, Glenn; Jefferson, Adam; Barker, Adam; Dozier, Jessica; Viola Jr, Dale; Racine, Cary M; Willitts Jr, Leonard; Hansel, Jonathan; Jones, Madeline (CTR); von Kelsch, Abigail (CTR); Burr, Kevin; Smiarowski, Charles (CTR); Replogle, Kathryn; Cranston, Anvaline; Vliet, Arthur; Collins, Christi; Faulk, Joseph; acl0@cdc.gov; ahrea@usgs.gov; aiguo.wu2.civ@mail.mil; alai1@llnl.gov; alejandro.contreras@sba.gov; andrew.m.grose.civ@mail.mil; andrew.w.hait@census.gov; applegate@usgs.gov; Astrid-Christina.Koch@ec.europa.eu; bblake@cusec.org; blewis@vbi.vt.edu; brooke2@llnl.gov; burbanma@usgs.gov; caitlin.m.rivers.civ@mail.mil; Carol.M.Mcallister@nga.mil; cary.a.talbot@usace.army.mil; chad.a.markin@usace.army.mil; charles.e.shadie@usace.army.mil; Chen.gary@epa.gov; chris.wiacek@dot.gov; christopher.aardahl@pnnl.gov; christopher.dunn@usace.army.mil; christopher.m.kiley.civ@mail.mil; christopher_barrow@nps.gov; daniel.l.gerrig.civ@mail.mil; daniel.obrien@dhses.ny.gov; daniel.porter@noaa.gov; david.r.ziaya@hud.gov; david.schilling@dot.gov; dbausch@pdc.org; dbj0@cdc.gov; dgeorge@iqt.org; dhenry@doc.gov; donald.v.sullivan@nasa.gov; donte.lucas@dc.gov; ebk9@cdc.gov; ed.strocko@dot.gov; edward.clark@noaa.gov; edward.w.lockwood.mil@mail.mil; egraeden@talusanalytics.com; gabriel.sampollramirez@ic.fbi.gov; gdmatthews@usgs.gov; george.o.walker@census.gov; glascoe1@llnl.gov; greg.tune@redcross.org; gustavo.v.santiago.mil@mail.mil; icf8@cdc.gov; jacqueline_r_meszaros@ostp.eop.gov; jamie.r.rhome@noaa.gov; Jarlath.ONeil-Dunne@uvm.edu; jean.chretien.mil@mail.mil; jean-luc.bald@eeas.europa.eu; jeff.mcqueen@noaa.gov; Jeffrey.Baumgartner@Hq.Doe.Gov; jenn.kruk@iem.com; jerry.w.webb@usace.army.mil; jib0@cdc.gov; Jim.Mitchell@la.gov; jody.r.wireman.civ@mail.mil; john.sokich@noaa.gov; john.valliere@sba.gov; joseph.lamana@hhs.gov; joshua_j_barnes@nsc.eop.gov; julia.vollmers@ic.fbi.gov; julie_e_schafer@nsc.eop.gov; kajones@sandia.gov; keith.slade@dc.gov; kelly.bennett2@hhs.gov; Kim_Harriz@ios.doi.gov; larry.morgan@pnnl.gov; latonya.s.robinson.mil@mail.mil; lemieux.paul@epa.gov; llhill@fs.fed.us; lsclampitt@usgs.gov; mac0@cdc.gov; magnuson.matthew@epa.gov; marc.levitan@nist.gov; mark.glaudemans@noaa.gov; mary.mullusky@noaa.gov; matthew.kralovec@digitalglobe.com; matthew.lim@hhs.gov; matthew.smith@hhs.gov; michael.mitravich@sba.gov; michael.ouimet@dps.texas.gov; michael.p.phillips5.ctr@mail.mil; michael.villeneuve@va.gov; mlstaff@dps.ohio.gov; mpeppler@usgs.gov; nancy.j.blyler@usace.army.mil; nancy.nurthen@hhs.gov; nasstrom1@llnl.gov; neelima.yeddanapudi@hhs.gov; nwood@usgs.gov; orville.p.harris.civ@mail.mil; patrick.dial@sba.gov; pcross@usgs.gov; pluehring@fs.fed.us; pobanz2@llnl.gov; prose@naccho.org; quoc.d.nguyen7.civ@mail.mil; "qzm4@cdc.gov"; "raber1@llnl.gov"; Cychosz, Rachel; "ravichanr@mail.nih.gov"; "richard.artz@noaa.gov"; "richard.knabb@noaa.gov"; Hanson, Robert; "robert.shankman@hhs.gov"; "robert.steele@pnnl.gov"; "ronald.g.meris.civ@mail.mil"; "rrmason@usgs.gov"; "rrpierce@usgs.gov"; "russell_c_washington@nsc.eop.gov"; Buras, Ryan; Potosnak, Ryan; "saichele@usgs.gov"; "sandy.eslinger@noaa.gov"; Bouker, Sarah; "scott.bauer@inl.gov"; McAfee, Scott; "scperry@usgs.gov"; Crawford, Sean; Carroll, Shenan; Melton, Sidney; "simpson35@llnl.gov"; "snead.kathryn@epamail.epa.gov"; "snyder.emily@epa.gov"; White, Stephen; "stephen.curren@hhs.gov"; "steven.m.jeffs.mil@mail.mil"; Monarez, Susan; "susan.smith@azdema.gov"; Stevens, Susan; Mohammad, Syed; "tdickinson@ostp.eop.gov"; Quitugua, Teresa; Martinez, Terry; Breslin, Thomas; McCool, Thomas; "tim.mcpherson@pnnl.gov"; "timothy.lant@hhs.gov"; "tjkempf@dps.ohio.gov"; "todd.barrett@dm.usda.gov"; "todd.m.richardson@hud.gov"; "toimu.reeves@northcom.mil"; "tony.lavoi@noaa.gov"; Brumfield, Tyrone (OGA); Ferris, Vienna; Vineet.Gupta@usace.army.mil; walter.dykas@hq.doe.gov; waters4@llnl.gov; wrajczak@mitre.org; wvj1@cdc.gov; "ThomasJacobs, Caroline@CalOES"; "Andrea.K.Ruminski@usace.army.mil"; "Boe.Timothy@epa.gov"; Baucom_Katherine@bah.com; "tkoenig@usgs.gov"; "hvraga@usgs.gov"; "mkim@usgs.gov"; Escobar, Alan E.; "judith.mitrani-reiser@nist.gov"; setriplett@fs.fed.us; Rebecca Harned; "Nate Smith"; "Timothy.K.Perkins.civ@mail.mil"; "reed_justin@bah.com"; "rosean@ornl.gov"; "mark.rowley@state.nm.us"; "brose@imd.idaho.gov"; "will.melville@maryland.gov"; "clarkr@dnb.com"; "thompsonk@dnb.com"; "nealist@dnb.com"; "dan.green@navy.mil"; "cbohn@dewberry.com"; "andrey.b.hetmansky.civ@mail.mil"; "mikan.stamenkovich@navy.mil"; "neil.trenk@census.gov"; "Lenee.Pennington@dgif.virginia.gov"; "Shane.Cherry@inl.gov"; "neil.holloran@navy.mil"; "heechongyu@tnema.org"; "Ryan.Hruska@inl.gov"; "bbehlendorf@albany.edu"; "AndersonN9@michigan.gov"; "Michael.Schneider@engilitycorp.com"; "ylt4@cdc.gov"; "bkaplan@cdc.gov"; "Steven.Fruchtman@amtrak.com"; "erich.chan@ic.fbi.gov"; "Edwin.L.Mason@usace.army.mil"; "jbaranyi@esri.com"; "gjpenn@dps.ohio.gov"; "colleen.hermans@wisconsin.gov"; "marie.kennedy@sd-lecc.org"; "dkulpanowski@leegov.com"; "KatesJ@nashuanh.gov"; "jeff.rubin@tvfr.com"; "Bosecker.Elizabeth@epa.gov"; "debbie.briedwell@oa.mo.gov"; "mwellman@cdc.gov"; "juan.l.orama.civ@mail.mil"; "michael.a.mellor.mil@mail.mil"; "Virgle.e.daugherty.ctr@mail.mil"; "bruce.l.bailey12.ctr@mail.mil"; "kevin.m.murphy118.ctr@mail.mil"; "mreichardt@myogc.org"; "tuttlema@ornl.gov"; "jessica.b.seepersad@nasa.gov"; "brian.e.tisdale@nasa.gov"; "leah.schwizer@nasa.gov"; "JNystrom@esri.com"; Stuart Rucker; "andrew_bailey@nps.gov"; "Tiffany.Meyer@fire.ca.gov"; "Steven.Hawks@fire.ca.gov"; "michael.a.bonura.mil@mail.mil";

Cc: "manley.c.frost.ctr@mail.mil"; "patricia.a.billups7.civ@mail.mil"; FEMA-Exercise; Long, Robert Sanders, Ashleigh; Bender, Alfred; Stainsby, Leiloni; Dickinson, Tamara; Laybourn, Laura; Gordon, Craig; Bottoms, Brad (CTR); Bowman, Lindsey; Pitts, Robert (CTR); Blasco, Kathleen; Manion, Richard; Sanderson, William; Liu, Jasmine; Gong, Carlene (CTR); Hendrickson, Peter (OGA); Bettinger, Jessica; "Yeddanapudi, Neelima"; Jesse Appler; "Talbot, Cary A ERDC-RDE-CHL-MS CIV"; Mahoney, Robert; "Francoise.VILLETTE@ec.europa.eu"; "Kaplan, Brian (ATSDR/DTHHS/OD)"; "Eileen.Watson@engilitycorp.com"; "Rockford, Adrianna"; "Joel Thomas"; Wenger, Avital; William Reddel; Domingue, Michael A Lt Col USAF NG NHANG (US); robert.pitts@newlighttechnologies.com; madeline.jones@newlighttechnologies.com; omitaomuoa@ornl.gov; Miller, Dan (MIL); "Palmer, Don K CIV NG NGB (US)"; "Julie Carter"; Davis, Eric (CTR); "Crapo, John"; Oliver, Stephen; Schwartz, Zerek; Nava, Ociel; "Steve Stoddard"; james.b.hiller.civ@mail.mil; Smith, Amanda; Randazzo, Dante; CHEM SSA TEAM; Brainovich, Matthew; "Hill, Terence E CTR (US)"; Choy, Eric; "Richardson, Harold CIV NORAD-USNC JTF - CS (US)"; "Biggerstaff, Matthew (CDC/OID/NCIRD)"; Hurick, Michael; Geller, Yevgeniy; cbelongie@fs.fed.us; Tom Moran; Pugliese, Victoria; "Clifford, Megan"; "Ryan Lanclos"; Trollinger, Rachelle; Dillon, Jennifer; "Camel, Matthew J MAJ USARMY NORAD-USNC JTF - CS (US)"; "Coy, David F LTC USARMY NORAD-USNC JTF - CS (US)"; Zapata, Carmen; von_kelsch_abigail@bah.com; Egan, Sarah; "Davis, Victor V. (WMD) (TFO)"; "Moran, Thomas"

Subject: Modeling and Data Working Group (MDWG)

Please join us for our monthly Modeling and Data Working Group (MDWG) meetings!

Calendar invitations will be updated prior to each meeting with the agenda, any updates to location or dial-in information, and facility access instructions (if attending in person).

Meeting Summary:
Meeting Name: Modeling and Data Working Group (MDWG)
Invited By: Jennifer Kruk (jennifer.kruk@associates.fema.dhs.gov)
When: 2:00-3:30 PM
Time Zone: Eastern

If attending in person:
FEMA HQ
500 C St SW
Washington, DC
Conference Room: 2SE-1803

If attending remotely: Please join me in an Adobe Connect Meeting.
Conference Bridge (Audio): [redacted], Passcode: [redacted]
Adobe Connect: https://fema.connectsolutions.com/mdwg2017/

If you have never attended an Adobe Connect meeting before:

Test your connection: https://fema.connectsolutions.com/common/help/en/support/meeting_test.htm

Get a quick overview: http://www.adobe.com/products/adobeconnect.html

Adobe, the Adobe logo, Acrobat and Adobe Connect are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Modeling and Data Working Group

2017 Yearly Plan | 3rd Wednesday of Each Month | 2:00-3:30 PM
A half-day Flood Summit will be held in lieu of the November meeting
FEMA-MDWG@fema.dhs.gov <mailto:FEMA-MDWG@fema.dhs.gov>

A Message from the MDWG
In January 2017, we will reconvene our monthly Modeling and Data Working Group (MDWG) meetings! Our plan is to alternate between capability-specific sessions (e.g., damage assessments, power outages, debris) and incident-specific sessions (e.g., IND, hurricane, chemical), each with a series of lightning talks and group discussions. A draft schedule is provided below. Please let us know if you or someone from your group is interested in speaking at any of the sessions, or if you have recommendations for who we should contact.

Upcoming Events & Meetings

January 18, 2017: Structural Damage Assessments
Damage assessments are an essential part of the response and recovery process and are critical to assessing the size, scope, and severity of an event. However, without consistent standards across various programs and agencies (e.g., state and local authorities, federal agencies, statutory authorities), there is often duplication of effort and delays in obtaining pertinent data necessary for response and recovery efforts.

This meeting will focus on assessing standard protocols, identifying common modeling and data resources that can be leveraged across programs, and optimizing the usage of information to make the damage assessment process as efficient and effective as possible.

Brief program updates are anticipated from the following groups/organizations:
* FEMA: Urban Search and Rescue (US&R), Recovery Program's Individual Assistance (IA) and Public Assistance (PA), National Flood Insurance Program/Mitigation's Substantial Damage Estimator (SDE), Disaster Survivor Assistance (DSA)
* Small Business Administration (SBA)

* Dept. of Housing and Urban Development (HUD)
* American Red Cross
* U.S. Army Corp of Engineers

February 15, 2017: Improvised Nuclear Device (IND)
This meeting will focus on the response and recovery timeline following an IND incident, the state-of-the-art IND modeling software (including who to contact and how to access), the products and deliverables produced, and the coordinating actions expected from the interagency. The MDWG will review the current IND information in the Model and Data Inventory (MoDI) to ensure the content is up-to-date and inclusive of the latest modeling tools available.

Brief program updates are anticipated from the following groups/organizations:
* Gotham Shield 2017 (GS 17) Exercise Overview
* FEMA: Interagency Modeling and Atmospheric Assessment Center (IMAAC)
* FEMA: CBRN Program Support
* DOE National Atmospheric Release and Advisory Center (NARAC)
* Defense Threat Reduction Agency (DTRA)

March 15, 2017: Power Outages
The U.S. electric power system is an essential part of our modern society—necessary for day-to-day operations ranging from communications and transportation to healthcare and public safety.

This meeting will focus on identifying modeling and data sources to predict power outages, resources to assess the extent of power outages after a disaster, and information necessary to assemble a timeline for power restoration.

Brief program updates are anticipated from the following groups/organizations:
* DOE: HQ and National Labs
* NASA: Short-term Prediction Research and Transition (SPoRT) Center
* MIT Lincoln Labs: Humanitarian Assistance and Disaster Relief (HADR) Systems
* FEMA Response
* Indiana Dept. of Homeland Security

April 19, 2017: Tornado
This meeting will focus on reviewing the latest tornado prediction models and discussing how these models can support early warning and an integrated public alert system. We will additionally discuss how to access data critical to response and recovery efforts such as the locations of safe rooms where survivors may be located.

Brief program updates are anticipated from the following groups/organizations:
* NOAA/NWS: Storm Prediction Center
* NOAA-NASA: GOES-R geostationary weather satellite
* University of Wisconsin-Madison
* FEMA: Federal Insurance & Mitigation Administration (FIMA), Urban Search and Rescue
* Army Corp of Engineers
* American Red Cross

May 17, 2017: Debris
This meeting will focus on the modeling and data needs for timely, accurate, and consistent estimates of debris quantities and types following natural disasters. Debris estimates, obtained during the Preliminary Damage Assessment (PDA), contribute to the recommendation of whether a disaster declaration should be approved by FEMA.

Brief program updates are anticipated from the following groups/organizations:
* Army Corp of Engineers
* FEMA: Recovery Public Assistance Program
* MIT Lincoln Labs

June 21, 2017: Hurricane
With the start of the Atlantic hurricane season, this meeting will focus on reviewing the hurricane timeline, the products and deliverables produced, and the coordinating actions expected from the interagency. The MDWG will review the current hurricane information in the Model and Data Inventory (MoDI) to ensure the content is up-to-date and inclusive of the latest modeling tools available.

Brief program updates are anticipated from the following groups/organizations:
* FEMA
* U.S. Geological Survey (USGS)
* NASA
* State and Local Authorities

July 19, 2017: Disaster Analytics
This meeting will focus on harnessing the power of data to drive decision-making during a disaster. We will evaluate interagency data analytics teams/programs and their objectives and products, along with how to coordinate results among and across interagency teams to produce actionable results for senior leaders.

Brief program updates are anticipated from the following groups/organizations:
* FEMA: Enterprise Analytics Division (FEMAStat), Recovery Analytics Division, GeoOperations Division, Preparedness Analytics

August 16, 2017: Earthquakes
This meeting will review the latest earthquake modeling software and identify datasets and models critical for an earthquake response. We will evaluate the response and recovery timeline following an earthquake and work to integrate the S&T community with the operational response. The MDWG will review the current earthquake information in the Model and Data Inventory (MoDI) to ensure the content is up-to-date and inclusive of the latest modeling tools available.

Brief program updates are anticipated from the following groups/organizations:
* FEMA Earthquake Program
* U.S. Geological Survey Earthquake Hazards Program

* National Earthquake Hazards Reduction Program
* American Red Cross

September 20, 2017: Critical Infrastructure
This meeting will focus how critical infrastructure is defined by different agencies (e.g., dams, power plants, and private sector), how it is monitored, and how the information is used during response and recovery efforts.

Brief program updates are anticipated from the following groups/organizations:
* DHS: Office of Infrastructure Protection
* FEMA: Infrastructure branches
* HHS: Critical Infrastructure Protection Program (CIP) for Healthcare and Public Health Sector

October 18, 2017: Chemical
The Model and Data Inventory (MoDI) will be expanded to include chemical hazards. This meeting will include an outbrief of an in-depth analysis of both the data sets and data processing tools for responding to chemical events including interagency interviews.

Brief program updates are anticipated from the following groups/organizations:
* Environmental Protection Agency
* Dept. of Labor Occupational Safety and Health Administration (OSHA)
* DHS Chemical Security Analysis Center (CSAC)
* FEMA-U.S. Army: Chemical Stockpile Emergency Preparedness Program (CSEPP)
* Defense Threat Reduction Agency (DTRA)
* DOE National Atmospheric Release and Advisory Center (NARAC)

November 15, 2017: Flood Summit
In November, the MDWG will consist of an extended meeting (½ day) focused on highlighting new and emerging technologies that increase communities' resilience to flood disasters and support operational decision making. The Flood Summit will be held in the Washington, D.C. metro area.

This extended session will review state-of-the-art flood modeling software and identify datasets and models critical for responding to flooding events. We will evaluate the response and recovery timeline following a flood and work to integrate the S&T community with the operational response. The MDWG will review the current flood information in the Model and Data Inventory (MoDI) to ensure the content is up-to-date and inclusive of the latest modeling tools available.

Brief program updates are anticipated from the following groups/organizations:
* DHS S&T Flood Apex Program
* NOAA/NWS/National Water Center and Office of Water Prediction
* FEMA Risk Mapping, Assessment, and Planning (Risk MAP)

December 20, 2017: Feedback Session
The final session will focus on bringing the MDWG community together to keep the momentum going into 2018. We will discuss the lessons learned, summarize the recommendations from each monthly meeting, and identify focus areas for the coming months based on a gap analysis.

FEMA MDWG Resources

Model and Data Inventory (MoDI) <http://gis.fema.gov/Model-and-Data-Inventory/> – An inventory of datasets and models used by emergency management; searchable by hazard, agency, ESF/RSF, and keyword
FEMA GeoPlatform <http://fema.maps.arcgis.com/home/index.html> – One-stop shop providing geospatial data and analytics in support of emergency management

Note! MoDI was designed to be used in Google Chrome or Mozilla Firefox.
If you use a different browser to view this site, certain elements may not appear as intended.

For questions or comments about the Modeling and Data Working Group (MDWG),
please contact: MDWG-FEMA@fema.dhs.gov <mailto:MDWG-FEMA@fema.dhs.gov> , or
Sr. Modeling and Data Analyst, Jennifer Kruk, Jennifer.kruk@associates.fema.dhs.gov <mailto:Jennifer.kruk@associates.fema.dhs.gov>
Program Analyst, Adriana Lard, Adriana.lard@fema.dhs.gov <mailto:Adriana.lard@fema.dhs.gov>