

December WRAP Modeling Forum Conf Call

- **Call Information:**

December 20, 1pm PT; 2pm MT; 4pm ET

Conference line: 312-461-9324

Participants access code 504539

Topics

- Update on Emissions
- MM5 Update
- Wind blown Fugitive Dust
- Fire Sensitivity Modeling
- Source Attribution Modeling
- Comparison of CMAQ with Alternate Model
- Alaska Modeling

November RMC Emissions Progress (1)

- Year 2000 Canadian national inventories for area and mobile sources added to simulation Pre02d
- Developed QA protocol products for simulation Pre02d
- WRAP RMC 2004 Interim Report

November RMC Emissions Progress (2)

- Additional, 36-km domain-wide emissions summaries provided to ARS, extended WRAP-only summaries provided last month
- Coordination with ERG and the WRAP to develop a protocol for obtaining 1999 Mexico emissions inventories

MM5 Update

- Performed MM5 sensitivity tests in response to comments on Peer Reviewers
 - Revised MM5 final configuration to not use surface temperature/humidity nudging and will not using any cumulus parameterization on 12 km grid (best performing configuration for precipitation)
- Restarted 2002 36/12km MM5 Runs with revised final configuration
 - Will be completed in December 2004
- Updated Reports @ <http://pah.cert.ucr.edu/aqm/308/mm5.shtml>
 - Response to Peer Review Comments on Sensitivity Tests (12/10/04)
 - Revised MM5 Sensitivity Reports (12/10/04)
 - Revised WRAP 2002 MM5 36/12 km Modeling Protocol (12/10/04)

Wind Blown Fugitive Dust Update

- CMAQ sensitivity simulations completed
 - CMAQ run with & w/o WB Dust Emissions
 - Results currently being evaluated
- Initial MPE completed
 - Results currently being reviewed/evaluated
- Draft Report completion expected by
12/23/04

Wind Blown Fugitive Dust Update

Next Steps

- Apply model using new MM5 results
 - Awaiting completion of MM5 runs
- Apply agricultural adjustments to Eastern States
 - Ag data under development
- Apply county-specific fugitive dust transport fractions to the windblown dust model
 - Will modify WB Dust model code to implement transport fraction at higher resolution (LULC-based)

Fire Sensivity

- Post-analysis of fire sensitivity runs and for presentation at 12/8 FEJF meeting:
 - <http://pah.cert.ucr.edu/aqm/308/meetings.shtml>
 - Largest effects were from wild fires
 - Natural fire emissions effects much larger than “anthropogenic” fires.

Source Apportionment

- Post-analysis of CMAQ-TSSA runs
 - results presented at the Nov 18-19 Attribution of Haze (AoH) meeting.
 - Model results prepared as ascii files for additional analysis by ARS for AoH meeting:
 - <http://pah.cert.ucr.edu/aqm/308/meetings.shtml>

Alternative Model

- Apply CAMx model on 36 km grid for the January and July 2002 periods (with ~15 day initialization)
 - Use new 2002 MM5 fields and latest pre02 remissions
 - Compare model performance with CMAQ
 - VISTAS found such comparisons to be a powerful diagnostic evaluation tool
- Apply CAMx PM Source Apportionment Technology (PSAT) for Feb/Jul 2002 using same source groupings as used in the CMAQ TSSA AoH assessment
 - Will provide independent evaluation of TSSA results (e.g., BC contribution)
 - May help explain “other” TSSA category
 - Comparisons may help improve both TSSA and PSAT formulation

Alaska Modeling

- Received and respond to comments on Alaska Modeling Protocol: “Preliminary WRAP Alaska Visibility Modeling,” dated October 15, 2004.
- Identify transition time between w/ and w/o sea ice
 - Important as use of sea ice limits PBL/LSM configuration
- Began the Alaska 2002 MM5 45/15 km simulations
 - Some delays due to priority to complete WRAP 2002 MM5
- Processing Alaska emissions data for CALPUFF modeling
 - Incomplete data currently available, just major point sources and emissions for major urban areas
- Begin processing other data (e.g., terrain/land cover) for CALPUFF modeling of major sources