



Next Round of Phase I Sensitivity Analyses

Photochemical Modeling Status Update

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Additional Sensitivity Analyses

- OSAT simulation to assess contributions to transported ozone in the Denver area of the 36 km GEOS-Chem Boundary Conditions (BCs), top BC, and all anthropogenic emissions in 36/12/4 domain
- Refine state growth assumptions for power plants and possibly other point sources that appear too aggressive using the EPA EGAS model
- Emission reduction scenarios under consideration for additional sensitivity analyses once growth issues addressed include:
 - Point Sources in NAA and state
 - Fuel option in NAA
 - VMT reduction in NAA



Current Phase II: Model Improvement Tasks

- Task 1: VOC inverse modeling using observations
- Task 2: MOBILE6 air toxics VOC inventory
- Task 3: Increased MM5 nudging
- Task 4: WRF alternative met model
- Task 5: WRAP Phase III O&G Update
- Task 6: 2006 CMAQ Base Case modeling
- Task 7: 2006/2015/2020 NFRCOG CONCEPT MV
- Task 8: Final CAMx 2006/2015/2020 run
- Task 9: Report, meetings and technology transfer



Current Phase II Detail: Model Improvement Tasks

- Task 1: VOC inverse modeling to identify source categories, locations, magnitudes and speciation of VOC emissions needed for modeled VOC to match observed VOC
- Task 2: Use MOBILE6 air toxics VOC inventory to compare on-road mobile source VOC species from MOBILE6 run in air toxics mode with photochemical modeling VOC inventory
- Task 3: Increased MM5 nudging to determine whether increased Four Dimensional Data Assimilation (FDDA) improves MM5 and CAMx model performance in the Denver region
- Task 4: Weather Research Forecast (WRF) alternative met model to assess whether WRF can provide improved meteorological representation of the Denver area for the June-July 2006 episode



Current Phase II Detail: Model Improvement Tasks

- Task 5: WRAP Phase III O&G Update To update the 2006/2015/2020 oil and gas (O&G) emissions across the western U.S. using latest information
- Task 6: 2006 Community Multiscale Air Quality (CMAQ) Base Case modeling To determine whether improved model performance can be achieved using CMAQ
- Task 7: 2006/2015/2020 NFRCOG CONCEPT MV to generate highly resolved 2006/2015/2020 on-road mobile source emission inputs using the NFRCOG network and CONCEPT MV
- Task 8: Final CAMx 2006/2015/2020 run to use model improvements and perform revised 2006, 2015 and 2020 modeling