

Status of the Guideline on Air Quality Modeling

R/S/L Workshop

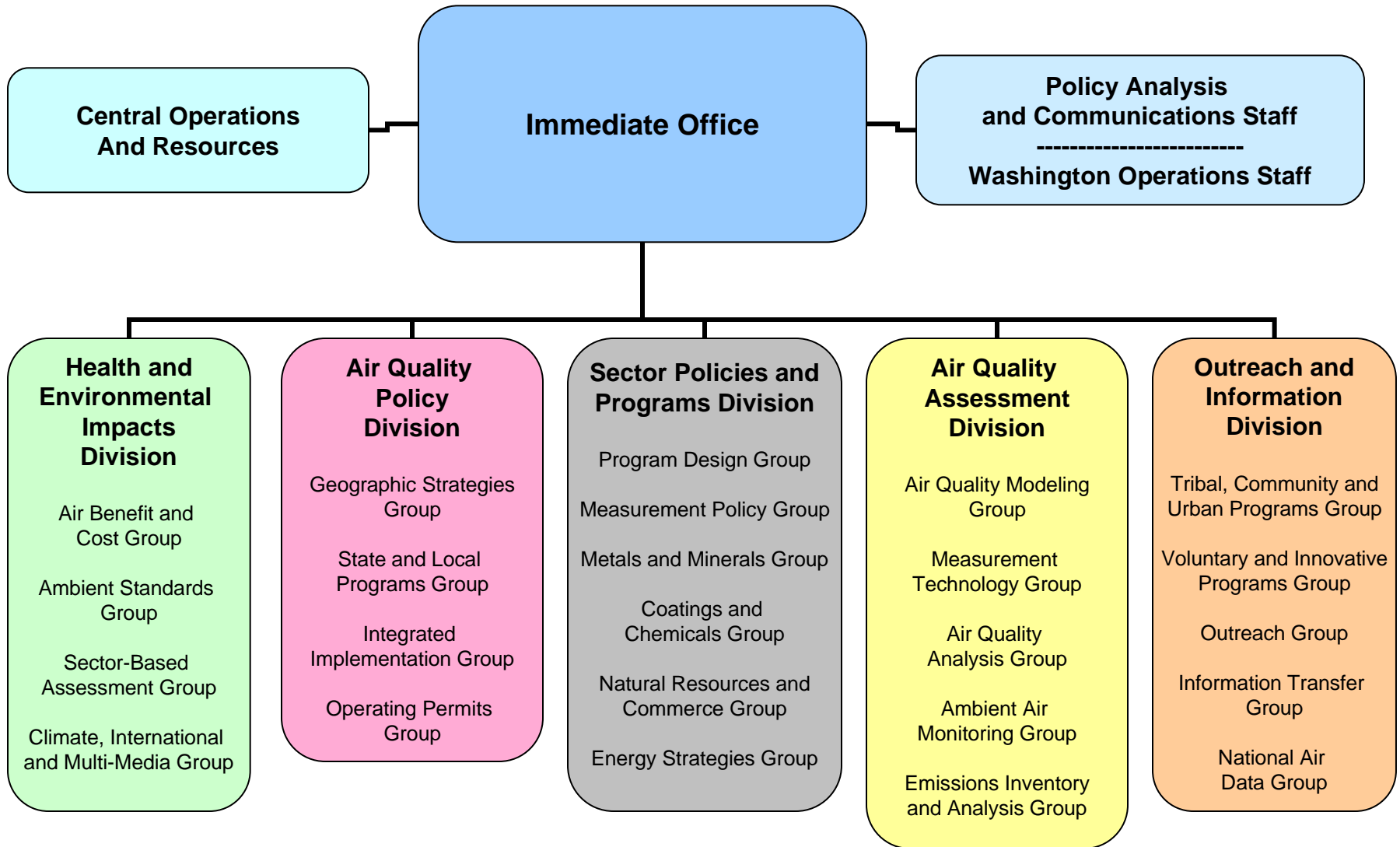
VA Beach, VA

May 15, 2007

Outline

- OAQPS Reorganization Update
- Air Quality Modeling Group Activities
- Model Clearinghouse
- AERMOD Modeling System
- CALPUFF Modeling System
- Next Steps
- Workshop Kickoff

Office of Air Quality Planning and Standards



Air Quality Modeling Group

- Conducts air quality modeling for regulatory and policy assessments
 - e.g., NO_x SIP Call, Heavy Duty Diesel, Nonroad Rule, Clear Skies, CAIR, CAMR, NAAQS RIAs
- Provides guidance for the application of air quality models for SIP demonstrations and NSR/PSD permitting
 - Appendix W, O₃/PM/RH Guidance
- Partners and coordinates w/ others (e.g, ORD, scientific community, etc) on model evaluations and development efforts
- NOAA Branch w/in our division provide meteorological & dispersion modeling expertise

FY06 Accomplishments

- **Regulatory/policy modeling**
 - CAIR/CAMR/CAVR petitions for reconsideration
 - Developed CMAQ-based RSM for PM_{2.5}
 - PM NAAQS & OTAQ Rules
 - Pulp & Paper sector modeling
 - ICAP & related international modeling projects
- **Permit modeling**
 - AERMOD Promulgation & Implementation
 - 8th Modeling Conference & R/S/L Modelers workshop
 - Model Clearinghouse & RO coordination
- **SIP Modeling Guidance & Support**
 - O₃ & PM/RH Modeling Guidance for SIP Demos
 - Detroit Multi-pollutant Pilot Study (ongoing)
- **Coordination w/ ORD and scientific community**
 - CMAS, AMD/AQMG retreat, NARSTO, monthly meetings
 - Hg tagging source appt into CMAQ & sensitivity analyses

FY07 Focus Areas

- 2002 Multi-pollutant Modeling Platform
- Integrated O3/PM/RH SIP Modeling Guidance
- Regulatory/Policy Modeling
 - O3 NAAQS, O3/PM Implementation, OTAQ rules, 812 Study
 - RTR & 2002 NATA, Sector initiatives, Mercury
- NSR/PSD Permit Modeling
 - Model Clearinghouse and R/S/L technical support
 - AERMOD/CALPUFF Implementation & Updates
- Modeling Infrastructure Investments
 - Multi-pollutant 'hybrid' modeling capability (CMAQ/AERMOD)
 - Sector-based, Multi-pollutant Source Appt Techniques
 - Deposition Modeling & Linkages w/ Eco, Watershed & Related Models
 - Multi-pollutant response surface modeling w/ CMAQ
- Accountability/Multi-pollutant Report

Need for Improved Modeling Support

- In May 2006, the ROs presented two recommendations to the Air Division Directors:
 - OAQPS need to enhance its technical expertise regarding the “new generation” of near-field models
 - OAQPS needs to accelerate its reinstatement of an active and effective Model Clearinghouse to provide technical expertise for permitting and SIP applications
- OAQPS has responded and taken actions

AERMOD Modeling System

- AERMOD Implementation Workgroup
 - Co-chairs = Roger Brode & Randy Robinson
 - Guide OAQPS resources on model development w/ AERMIC & community
 - 3 State led subgroups on MET issues, surface characteristics, & urban improvements
- AERMIC reinstated wrt science issues
- Update to AERMOD Regulatory Code
 - January 2007
- AERSCREEN/AERSURFACE
- Gridded MET tool development

CALPUFF Modeling System

- Update to Regulatory Approved Version
 - June 2006, Version 5.7 to 5.711a
- Issues with planned update to VISTAS version
 - Discussions across Federal agencies
 - BART apps separate from NSR/PSD
 - Engaged TRC through VISTAS
 - Despite delays and frustrations, it illustrates value of update process and need for community to work together
- Update outcome to be discussed Weds
 - Will clarify role/responsibility/expectations of model developer and modeling community

Next Steps: Items of Interest

- AIWG outcomes & report
- AERMOD & CALPUFF updates
- AERSCREEN & AERSURFACE release
- Gridded MET tool demo
- Model Clearinghouse upkeep & usage
- Continued interaction with policy staff
- Potential for “Interim” Modeling Conference

Workshop Kickoff

- We are going to address issues
- We are going to roll up our sleeves
- We are going to not leave unless for each issue:
 - Resolution found or ID process for resolution
 - Point of contact/responsible group
 - Timeline established
- Commitments will be tracked and communicated to all