

WRAP DEJF 11/02 MEETING

May 2003: Mark Scruggs

- Identified Candidate Members
- Identified Possible Co-chairs
- Drafted Forum Mission Statement
- Drafted 2003 Workplan
- Drafted 2004-2006 Workplan
- Underground for the Holidays
- Polish and Post Mission Statement/Workplan

WRAP DUST ASSESSMENT

BASIC INFORMATION NEEDS

- Working Definition of Dust
 - Particle size
 - Chemical composition
- What Fraction is Natural?
- What Fraction is of International Origin?
- How/can it be Assessed with Regional Scale AQ Models?

FUGITIVE DUST EMISSIONS

HIGHLIGHTS OF
RECENT FINDINGS
AND ASSESSMENTS

WRAP/WESTAR SPONSORED ACTIVITIES

- WRAP R&D Forum Expert Panel Review
 - Transportable Fraction Estimates
 - Paved/Unpaved Road Emissions Calculation
 - Wind Erosion Calculation
- WESTAR
 - Unpaved Road Emission Estimates
- WRAP Emission Forum
 - Wind Erosion from Vacant Lands

WRAP R&D Expert Panel Review

Countess November 2002

- Transportable Fraction
 - Assumptions not adequately quantified
 - Acreage-weighted values X2 too high
 - New field studies needed
- Wind Erosion Methodology (wind tunnel based)
 - Representativeness of wind tunnel data questioned
 - More field studies needed
 - Previously endorsed Draxler's model
- Progress in Estimation Methods Since the 2001 Expert Panel Report

WESTAR Report on Dust Deposition and Removal Mechanisms

Etyemezian et al. January 1, 2003

- Unpaved roads
 - Transportable fraction near 1 for daytime emissions in arid west
 - Steady-state Gaussian models can provide good representations (at least for unstable conditions)
 - Gillette Box Model probably not valid
 - Emission factors dependent on vehicle speed
 - AP-42 overestimates emissions by 1.5 to 2X for speeds under 35 mph
 - More study needed