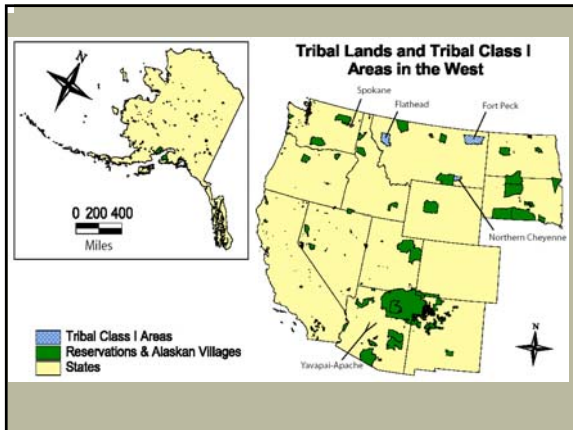




## Attribution of Haze Project Update

### Fire Emissions Joint Forum Meeting

June 16, 2004  
Portland, OR



### 2004 AoH Project Deliverables

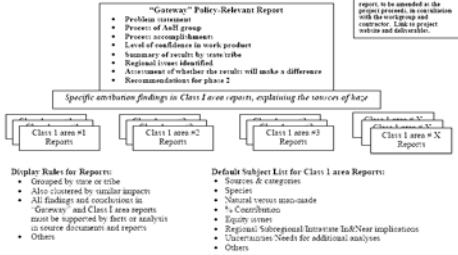
- Complete report by January 2005
- Identify:
  - Geographic source areas of emissions that contribute to impairment at each mandatory federal and tribal Class I area
  - Mass and species distributions of emissions by source categories within each contributing geographic source area
  - The amount of natural and manmade emissions affecting each Class I area

### 2004 AoH Project Deliverables

- Provide:
  - Documentation of the assumptions, methods, and uncertainties used in the integrated analyses of modeling, monitoring, and emissions data.
  - Succinct, clear summaries for policymakers, of the estimated areas and sources of impairment for each Class I area, including the associated uncertainty

## Report Structure

### General Structure for Attribution of Haze Report<sup>1</sup>



**Display Rules for Reports:**

- Grouped by state or title
- Also clustered by similar impacts
- All findings and conclusions in Gateway and Class I area reports must be supported by facts or analysis in source documents and reports
- Others

**Default Subject List for Class I area Reports:**

- Sources & categories
- Species
- Natural versus man-made
- % Contribution
- Equity issues
- Regional Subregional Interstate Intra/Neat implications
- Uncertainties/Needs for additional analyses
- Others

Source Documents & Reports  
(WRAP data and other information)

Modeling Monitoring Emission Inventories Other Source X Other Source Y Other Source Z

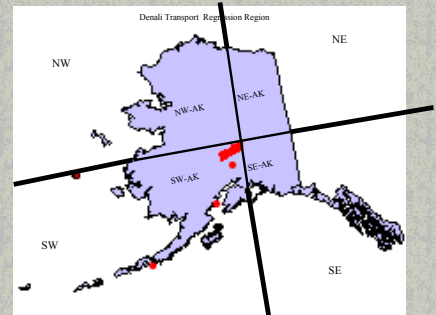
## AoH Project Data Sources

- Source apportionment modeling simulations from the Regional Modeling Center
  - Existing and refined emissions inventories from the Dust, Emissions, and Fire Forums
  - 30-40 tags per run
  - Emissions matrix (major source category/state/species)
- Receptor-oriented source contribution analyses of aerosol and meteorological monitoring data from the Causes of Haze Assessment project
  - Contribution of source regions to monitored IMPROVE light extinction species (SO<sub>4</sub>, NO<sub>3</sub>, OC, EC, fine mass, coarse mass)

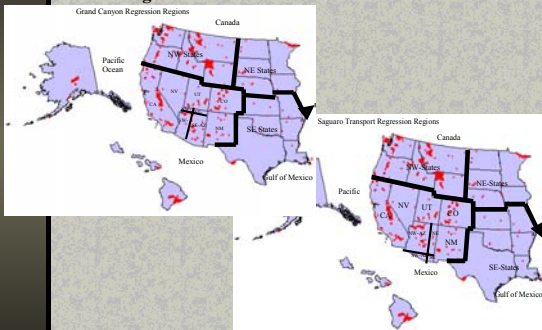
### Tagging Priorities for "2002-like" EIs (State/Source Category/Species) for Geographic Source Apportionment Modeling Study (6/04)

CMAQ/Models3 Emissions Groupings	Source Categories (Priority Order)	States/Countries/Regions to be Tagged	# of Tags	WRAP Region Data Source	Comments
SO <sub>2</sub>	1. Point 2. Combined Mobile (on-road + non-road)		1, 16 2, 16	1. Pechan 2. ENVIRON	Accounts for ~85 % of regional emissions, varies by state
NO <sub>x</sub>	1. Point 2. Combined Mobile (on-road + non-road)		1, 16 2, 16	1. Pechan 2. ENVIRON	Accounts for ~80% of emissions, varies by state, no biogenic NO <sub>x</sub>
NH <sub>3</sub>	Total NH <sub>3</sub> from all source categories	1-13. Contiguous WRAP region states (WA, OR, CA, AZ, NV, UT, ID, MT, WY, CO, NM, SD, ND) 14. Mexico 15. Canada	16	Various	Accounts for 100 % of emissions, dominated by area source category in all states, no biogenic NH <sub>3</sub>
PM <sub>2.5</sub> (Includes EC, OC, fine fraction dust, and small amounts of directly emitted NO <sub>x</sub> and SO <sub>2</sub> )	EC from: 1. Combined Fire (Wx, Rx, Ag) 2. Area	16. Combined area of states east of WRAP region	1, 16 2, 16	1. Air Sciences 2. Pechan	1. Fire accounts for >50 % of regional PM <sub>2.5</sub> emissions, varies by state 2. Area accounts for ~33% of regional PM <sub>2.5</sub> emissions, varies by state
PM <sub>coarse</sub> (Includes all species in the PM <sub>2.5</sub> to PM <sub>10</sub> aerosol fraction)					

### CoHA Project – Example Approach: Receptor-oriented source contribution analyses of aerosol/meteorological monitoring data



### CoHA Project – Example Approach: Receptor-oriented source contribution analyses of aerosol/meteorological monitoring data



### CoHA Project – Example Approach: Receptor-oriented source contribution analyses of aerosol/meteorological monitoring data

