

Day 1 – 3:15p

PHASE II PROJECT

- Ag Burning – Integration of QC responses
- NIF Format
- Plume Characteristics Update
- Next Steps

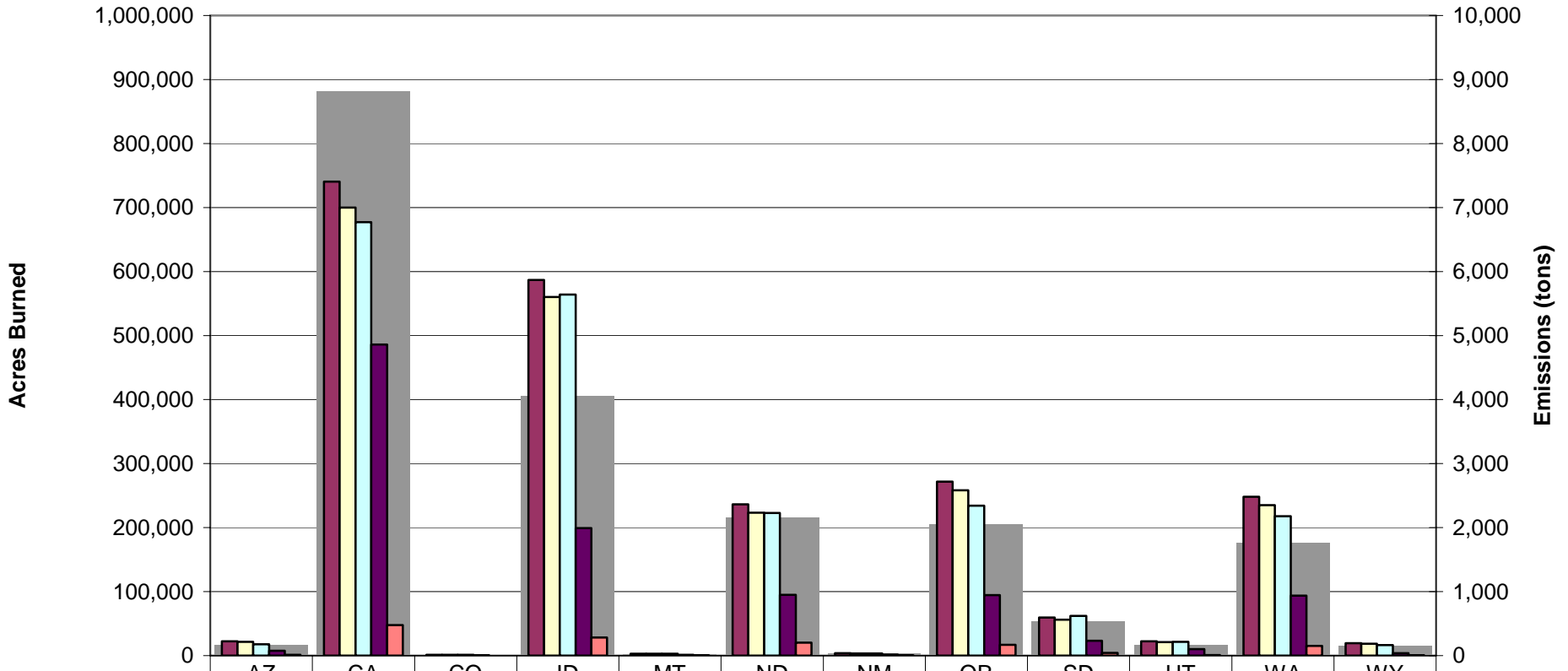
Agricultural Burning Integration of QC Responses

Ag Phase I Emission Inventory

- Phase I EI is WRAP 2018 Emission Inventory “Base” Scenario. In turn derived from ERG data collection for 1996 EI
- Phase I data largely based on NASS statistics for ag production
- Phase I is starting point for building WRAP Ag EI for 2002

Ag Phase I Data

Annual Agricultural Burning Activity and Emissions for States - All Crops



	AZ	CA	CO	ID	MT	ND	NM	OR	SD	UT	WA	WY
AcresTreated	16,169	881,951	501	405,924	2,676	215,883	3,453	205,115	52,596	16,686	176,249	14,839
Sum of PM10	225	7,407	12	5,870	29	2,362	38	2,718	593	224	2,480	194
Sum of PM25	214	7,000	11	5,603	28	2,231	36	2,584	563	213	2,352	186
Sum of VOC	178	6,773	11	5,641	28	2,227	36	2,341	622	217	2,177	165
Sum of NOX	76	4,859	5	1,994	12	949	15	945	233	102	938	38
Sum of SO2	13	477	1	285	2	201	3	167	42	11	151	4

Ag Outreach

- Phase I Ag Emission Inventory was summarized and QC Packets were sent to 12 States and 3 Tribes for review
- 2 Purposes for Packets:
 - Inform States and Tribes of the WRAP Phase I emission inventory
 - Request improvements to data or seek new database for 2002 if available

Ag QC Packet Contents

- State/Tribe Summary Tables
- WRAP-wide Summary Charts
- Feedback Forms
- Supporting Documentation
- CD-ROM including:
 - Entire Phase I Ag database
 - Excel spreadsheet with tables and charts
 - Documentation files

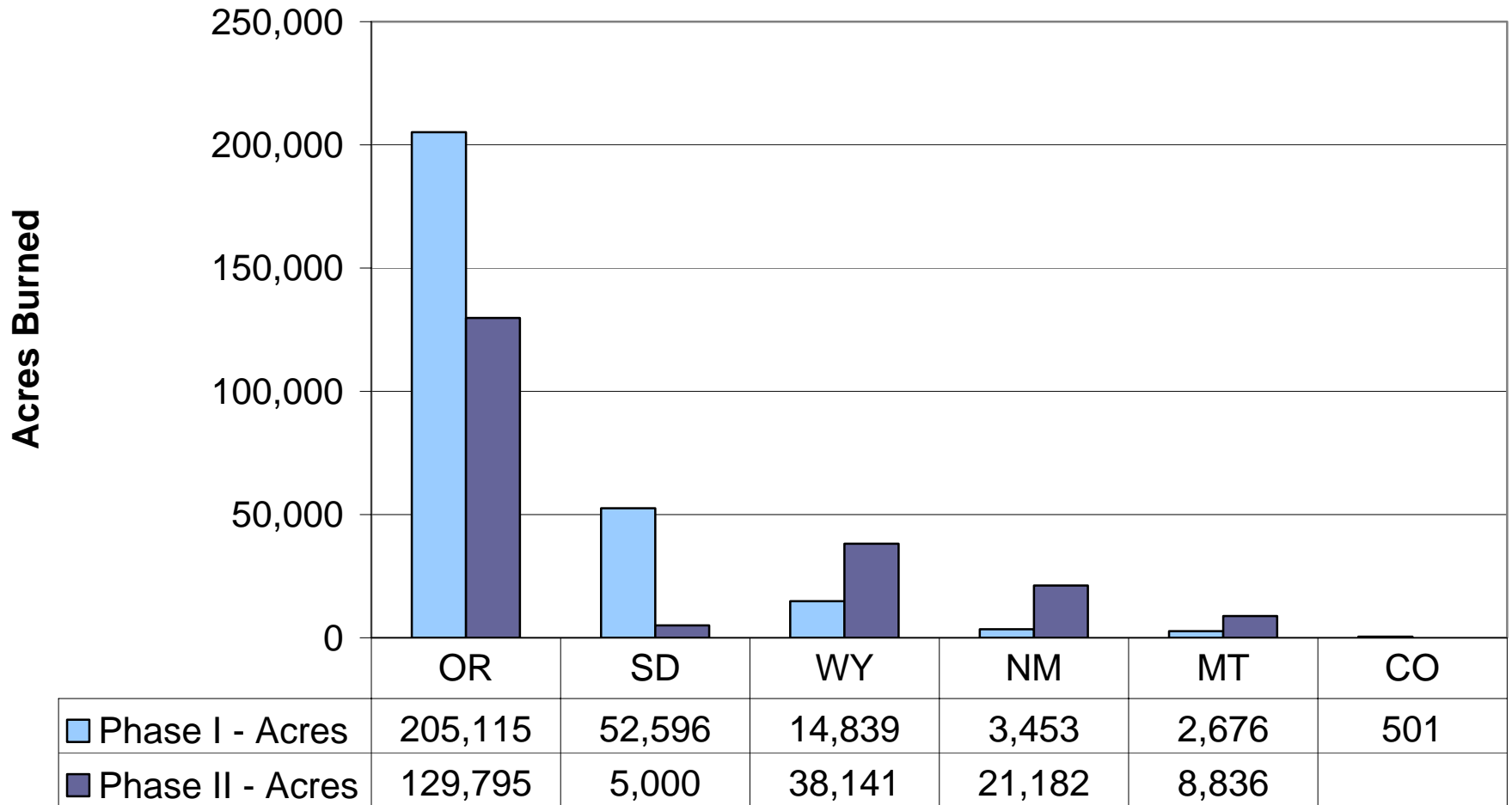
Ag Outreach Responses

- Responses to Request for 2002 Ag Burning Data Improvements:
 - New Data Received from:
 - CA, ID, MT, NM, OR, SD, UT, WA, WY
 - “No Change” Response from:
 - AZ, ND
 - “No Ag Burning” Response from
 - CO
 - No Response:
 - Nez Perce Tribe, Coeur d’Alene Tribe, Spirit Lake Tribe

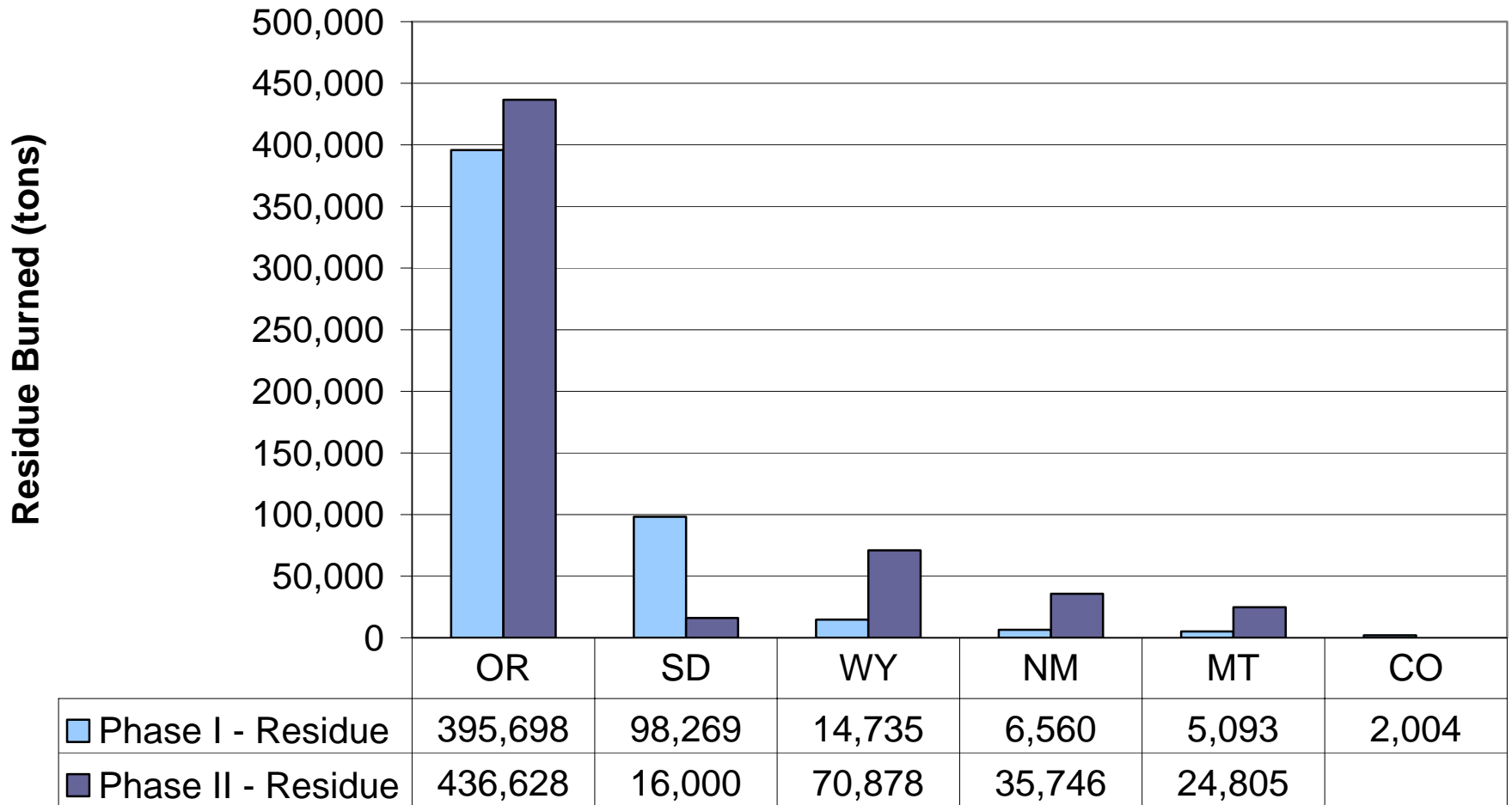
Phase I - Phase II

- Phase II EI is the combination of the Phase I data with the Phase II improvements from the Ag Outreach responses.

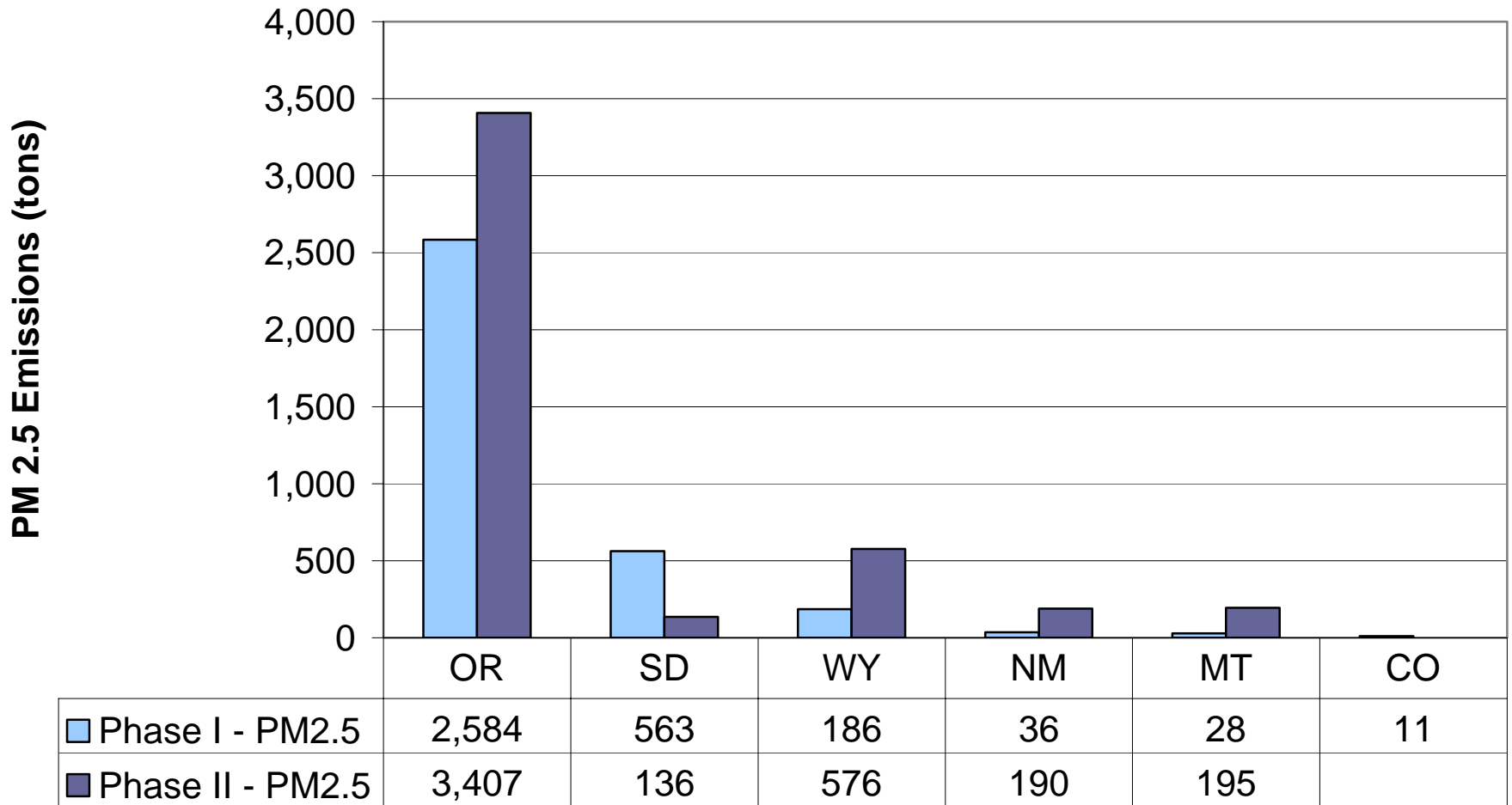
Phase I vs. Phase II Ag Burning Emission Inventory - Acres Burned



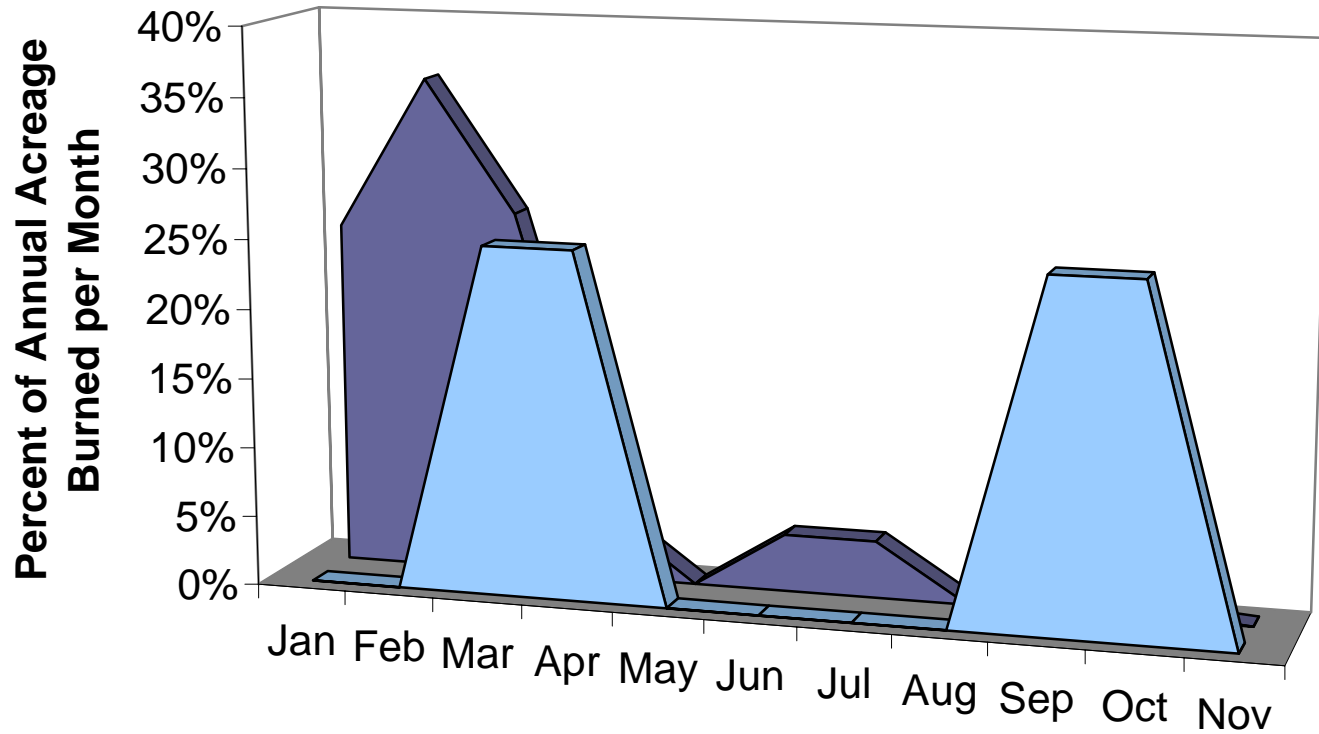
Phase I vs. Phase II Ag Burning Emission Inventory - Residue



Phase I vs. Phase II Ag Burning Emission Inventory - PM 2.5

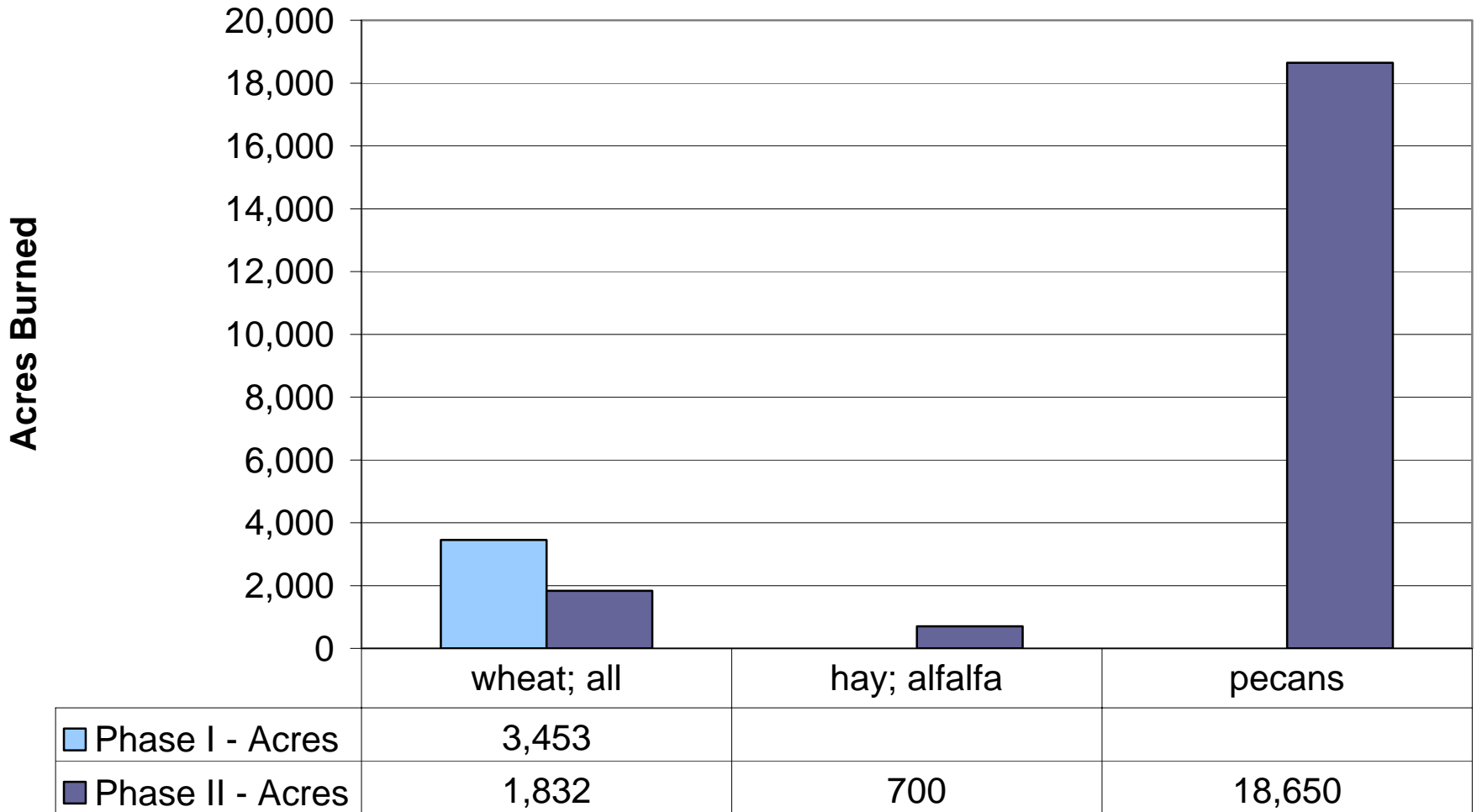


Phase I vs. Phase II Ag Burning Emission Inventory New Mexico - Temporal Allocation



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Phase I - Percent of Acres	0%	0%	25%	25%	0%	0%	0%	0%	25%	25%	0%
Phase II - Percent of Acres	25%	36%	26%	5%	0%	4%	4%	0%	0%	0%	0%

Phase I vs. Phase II Ag Burning Emission Inventory New Mexico - Acres Burned



Plume Characteristics Update

Potential use of Daysmoke Model

Daysmoke

- Per Gary Achtemeier (10/29/2004 conf call)
- “A dynamical model to simulate movement and deposition of plume rise and vertical distribution of smoke particles for CMAQ simulation”
- Requires activity related parameters
 - Effective plume diameter
 - Smoke temperature anomaly
 - Initial smoke vertical velocity

Activity Related Parameters

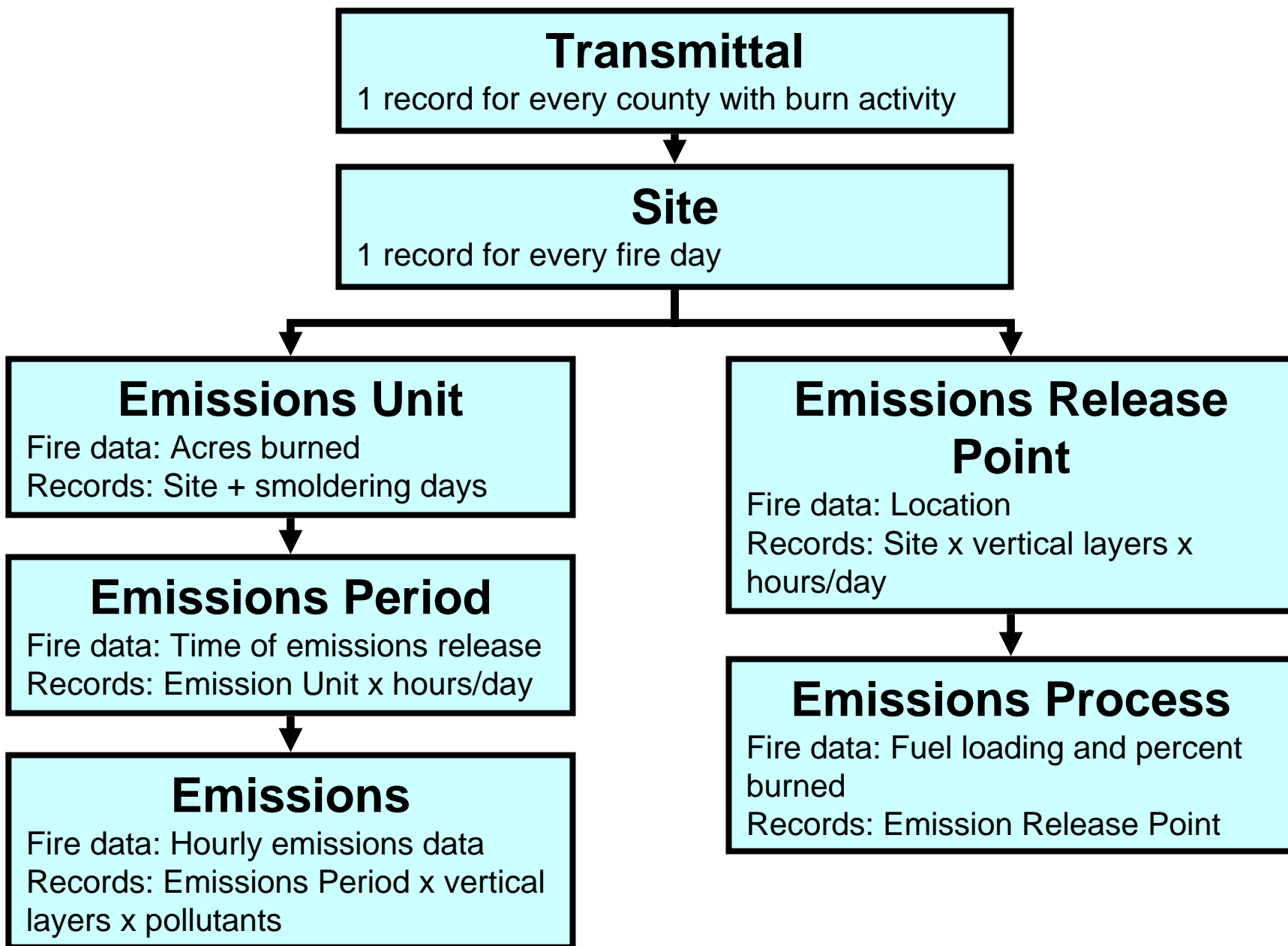
- Effective diameter
 - How does Daysmoke diameter relate to activity data: fire size, geometry, etc.
- Smoke temperature anomaly & Initial smoke vertical velocity
 - FEJF currently has top and bottom of plume and percent fumigate in first layer
 - How to integrate FEJF heat release to Daysmoke

Processing WRAP Burn Data According to NIF Version 3.0

Overview of NIF Format

- Wildfire, Rx and Ag burn data submitted using point source NIF format
- NIF point source format consists of 8 tables
- Tables and fields adapted for fire use according to LADCO style (EC/R)
- Burn data requires 7 tables
 - (*control equipment* table optional)

NIF Table Organization



Progress Towards Submission in NIF Format

- Obtained NIF definitions and “go by” from EC/R
- Matched items reported in WRAP database with appropriate NIF fields
- Determined table relationships
- Algorithm in progress for export of WRAP EI (single table) to NIF (7 tables)

General Technique for NIF Exporting

- Input database into *Labview* for data parsing and manipulation
 - Manipulation involves algorithms to format data or to allocate data temporally/spatially (e.g. over vertical layers, 24 hours a day)
- *Labview* creates spreadsheet file which can be imported into *Access* template (provided by EPA)

