

# Summary and Concluding Remarks

# Prescribed fire data needs related to air quality and health

- For air quality regulators, the main priority is emissions data at sufficient temporal and spatial resolution, as well as information that can be used to improve speciated emissions estimates
- For health impacts, other necessary information is vulnerability data for exposed communities, fire-specific concentration response functions, and community response data
- There is a need to become comfortable with uncertainty in the data; large sources of uncertainty remain, but we cannot expect to be perfect
- The importance of fire in air quality is expected to grow; it would be helpful if the roles of land manager and air quality regulators in data collection are well defined

# A unified prescribed fire record: Issues and opportunities

- Very large uncertainties and differences are present in available prescribed fire records
- An incentive for land owners, especially private, may be necessary to encourage participation in a unified database
- Some agencies' record-keeping may become limited by resources; automated systems could be necessary
- Fuel load/consumption pre-/post-burn evaluations would be useful
- Users of prescribed fire data need to understand the sources, how it was produced, and its limitations
- How to account for ground fuels is an important research need
- Rely on satellite data when no land-based info is available

# Sustainability of a community prescribed fire information system

- Air quality forecasts are currently being used to inform land managers; additional information that can be used to constrain burning and avoid air quality/health impacts would help
- Fire data is being used by air regulators to analyze exceedances
- Additional developments that would aid air quality management include forecasted PM2.5 concentration fields, hindcasts based on recorded fire data, and routine modeling beyond exceedances to identify areas subjected to smaller but more frequent smoke impacts
- Efforts that help develop databases in states without a system and facilitate data calibration would be valuable
- There is a need for greater coordination across states and fire/air quality communities; need to sustain efforts to integrate data and tools (perhaps on single website/database)