

# Inter-RPO National Wildfire Emissions Inventory *Status and Schedule*

RPO National Technical Meeting



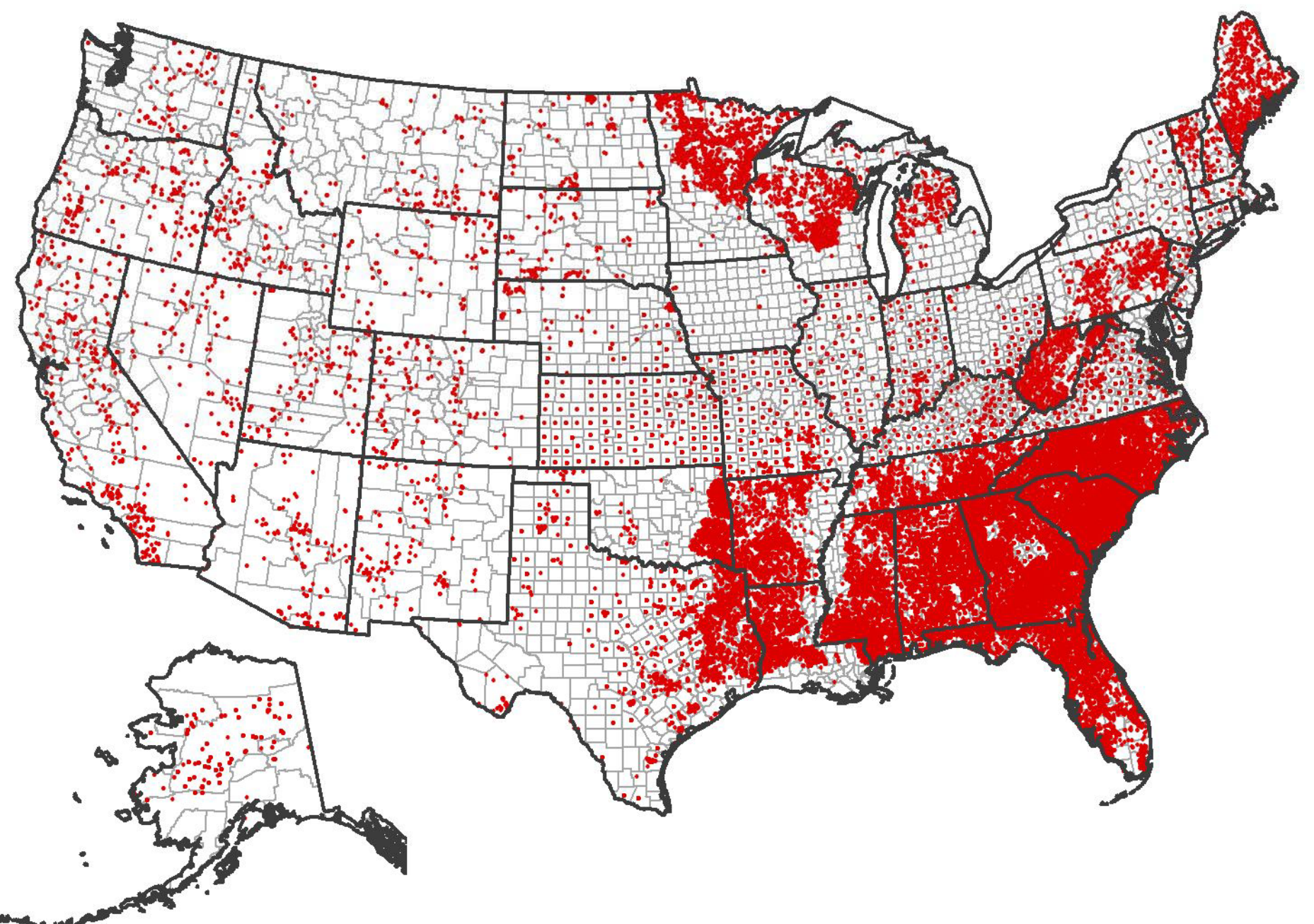
June 10, 2005

Denver, Colorado

*E<sup>C</sup>/R* Incorporated

# Inter-RPO WF – Steering Committee

- Pete Lahm, USDA-FS  
(Chair)
- Tom Moore, WRAP
- Megan Schuster – MANEVU
- Pat Brewer, VISTAS
- Mark Janssen, Midwest RPO
- Annette Sharp, CENRAP
- Tom Pace, EPA-OAQPS
- Chuck Sams, USDA-FS
- Mark Fitch, USDA-FS



# Inter-RPO WF – Project Overview

- Build national inventory for WF for 2002.
- Goals:
  - Complete (in terms of activity data)
  - Refined fuel consumption method
    - Time and location specific moisture content used to derive fuel consumption rates and EFs with FEPS.

# Inter-RPO WF – Project Overview

## Goals (continued):

- Consistent technical methods
  - Emission calculations
  - Plume characteristics (peer review completed)
- Standardized Electronic Formats
  - National Inventory Format (NIF 3.0) [modified]
  - Model Ready (SMOKE IDA)

# Inter-RPO WF – Work Status

- Project Work Plan (reviewed/approved)
- 2002 WF activity data.
  - RPO data compiled
  - Data augmented with state and local info
  - Quality Control (QC) routines
- Fuel consumption rates and emissions factors.
  - Fire Emissions Production Simulator (FEPS)

# Inter-RPO WF – Work Status

- Preliminary EI compiled.
  - Daily fuel moisture lookup
  - Fuel consumption and emission factors from draft FEPS lookup table (pre-Strawman review)
- Strawman documents (available 6/13).
  - Fuel Loading
  - QC/Duplication Checks

# Tech Preview...

- Lookup table for fuel consumption and emission factors
  - 1350 Fuel Categories
    - Region
    - NFDRS Fuel Model
    - Moisture Regimes
    - Flaming/Smoldering

# Tech Preview...

- Lookup table for fuel consumption and emission factors (continued)
  - FEPS runs executed for each fuel category:
    - Total Fuel Consumed
    - PM2.5, PM10, TSP, PMC, EC, OC, SO2, NOX, VOC, CO, CH4, NH3
      - Some pollutant EF's calculated empirical relationships.

# Tech Preview...

- FEPS Lookup Table – screen shot

Region	NFDRS	Moisture	Severity	Day	Total Consumed (ton/acre)	PM2_5EF (lb/ton)	NOXEF (lb/ton)	NH3EF (lb/ton)
WRAP	G	dry	S	1	32.33	24.20	3.32	4.68
WRAP	G	dry	S	2	2.12	33.26	1.85	6.82
WRAP	G	mod	N	1	12.00	25.32	3.14	4.95
WRAP	G	mod	N	2	1.13	33.26	1.85	6.82
WRAP	G	moist	N	1	6.71	24.83	3.22	4.83
WRAP	G	moist	N	2	0.16	33.26	1.85	6.82
WRAP	G	vdry	S	1	35.96	24.21	3.32	4.69
WRAP	G	vdry	S	2	2.69	33.26	1.85	6.82
WRAP	G	vwet	N	1	0.06	31.56	2.13	6.42
WRAP	G	vwet	N	2	0.00	0.00	0.00	0.00
WRAP	G	wet	N	1	2.03	24.25	3.31	4.70
WRAP	G	wet	N	2	0.00	33.26	1.85	6.82

## Legend

### Severity

S - Severe

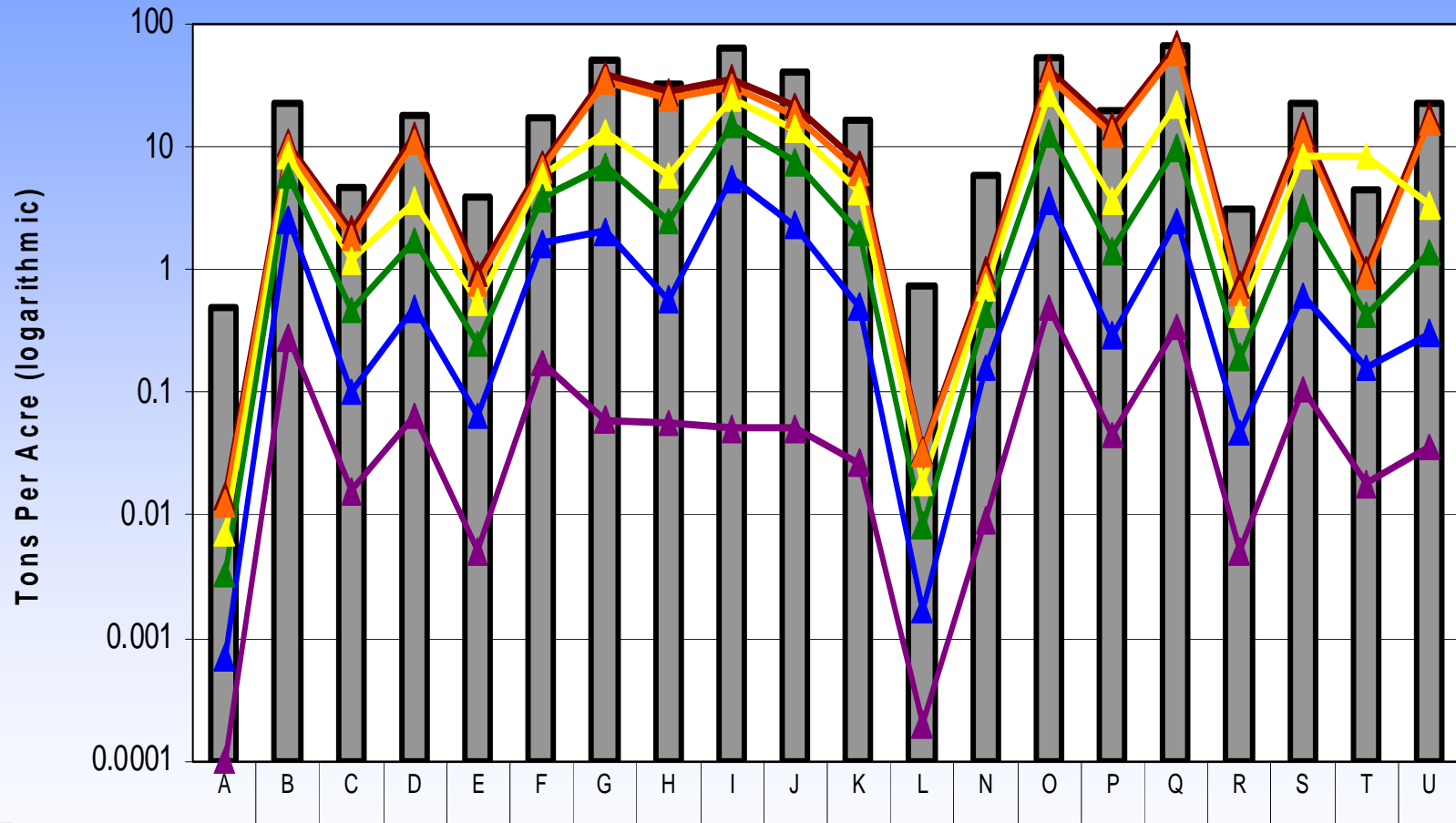
N - Not Severe

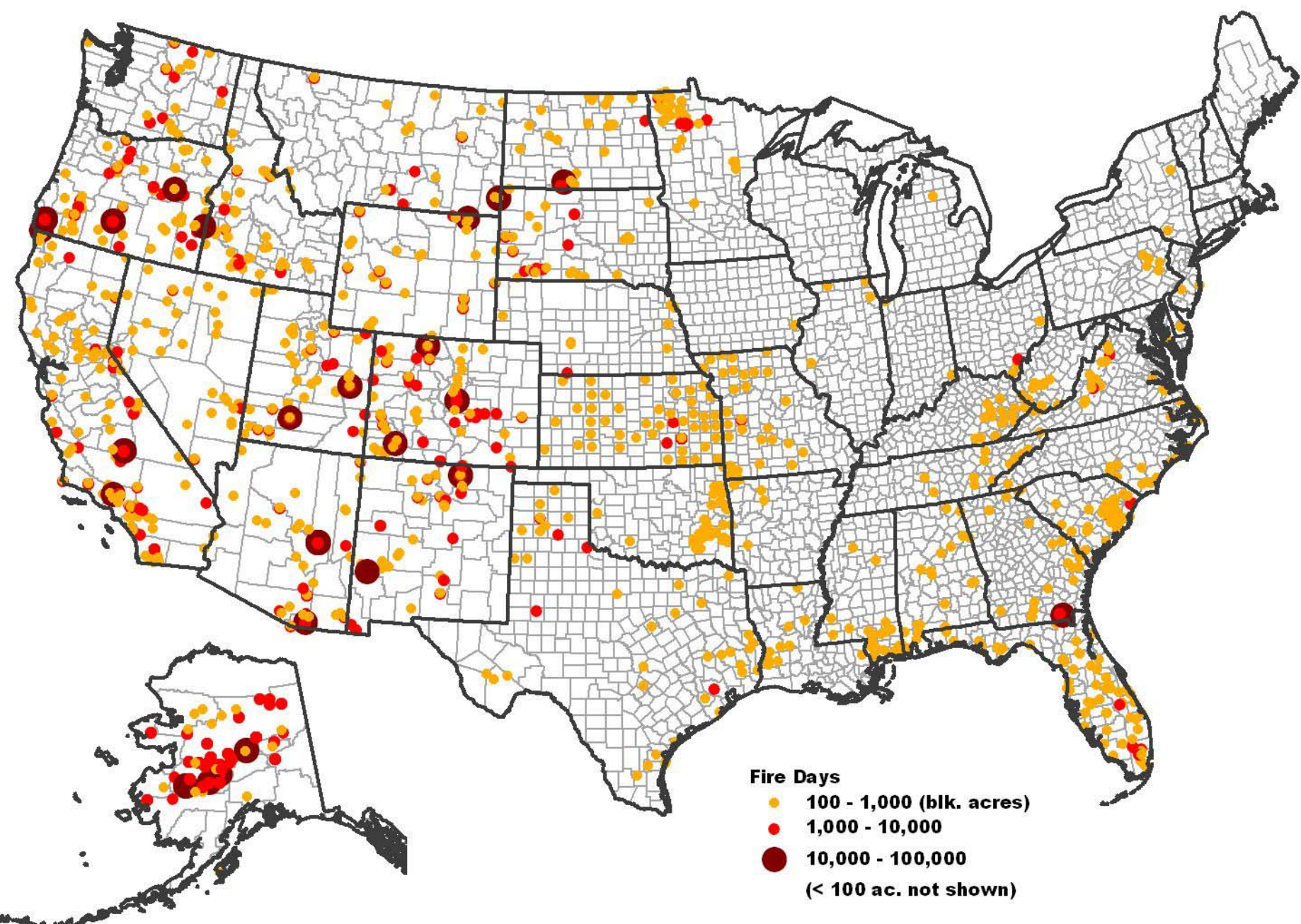
### Day

1 - Flaming

2 - Smoldering

# Inter-RPO National Wildfire Emission Inventory WRAP - Fuel Consumption Comparison





# Inter-RPO WF – Addl. Tasks

- Several tasks identified to add value to the national WF EI for the RPO's:
  - WRAP application and assessment of FCCS fuel models (instead of NFDRS).
  - Inclusion of additional fire characteristics (e.g., 10-hour fuel moisture) into fire record to facilitate pre-processing plume models.
  - Enhanced analysis section of final documentation.
    - Numerical effects of new/revised technical methods.
    - Recommendations (to RPO's) on appropriate use of EI.

# Schedule

June 13	Fuel Loading Strawman available to Steering Committee
	QC and Duplication Check Strawman available to Steering Committee
<b>June 20</b>	<b>Conference call (2 hours) to discuss Strawman Documents</b>
<b>June 22</b>	<b>Agreement on necessary changes to Fuel Loading lookup table and activity data.</b>
June 30	Final EI, electronic file deliver, and draft documentation.
July 21	Final documentation