

Inter-RPO National Wildfire Emissions Inventory

*Work Underway – Information
Update & Discussion*

WRAP – FEJF

June 7-8, 2005

Denver, Colorado



Inter-RPO WF – Work Status

- 2002 WF activity data compiled and QC'd
- Fuel consumption rates and emissions factors generated by multiple runs of Fire Emissions Production Simulator and QC'd for look-up table.
- Draft EI compiled.
- Strawman documents (Fuel Loading and QC/Duplication Checks) being prepared.

Inter-RPO WF – Project Overview

- To 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.
 - Consistent technical methods
 - Emission calculations
 - Plume characteristics

Inter-RPO WF – Tech Preview

- Consumption and EFs for Each Fuel Category
 - Fuel Category (1350 total)
 - Region
 - NFDRS Fuel Model
 - Moisture Regimes
 - Flaming/Smoldering
 - 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.

Inter-RPO WF – 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 WF – Tech Preview

- FEPS Lookup Table QC
 - FEPS output reviewed for logical consistency.
 - VISTAS models I,J, and T.
 - WRAP model K was all zeroes.
 - CENRAP model A. Moist had highest consumption.
 - All regions model A.
 - MAINE models I,J, and T.
 - Resolution
 - Reran FEPS for specific regions and fuel models.
 - Appropriate relationships verified.
 - Changes made to FEPS lookup table.

Inter-RPO WF – Tech Preview

- Key Data Fields for Consumption and EF lookup
 - Region
 - NFDRS
 - Moisture
 - Smoldering/Flaming

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 10	Fuel Loading Strawman to Review Committee (RC)
	QC and Duplication Check Strawman to RC
June 22	Agreement on necessary changes to Fuel Loading lookup table and activity data.
June 30	Final EI, electronic file deliver, and draft documentation.
July 21	Final documentation