

In-house QC

*Semi-Automated Duplicate
Checking, Large Fire Refinement
Complex Fire Identification*

Phase 2 Fire Emission Inventory

WRAP – FEJF

February 23-24, 2005

Salt Lake City, Utah



AIR SCIENCES INC.

DENVER • PORTLAND

Semi-Automated Dup Checking

- Fires within 10K of each other *PLUS* manual check of fire name for suspected duplicates
- Fires with similar name *PLUS* calculation of distance between fires for suspected duplicates

Dup Check Type	# Fire Events Dropped	Acres Dropped	Consumption Dropped (10 ⁶ tons)
10k/Name Checks	27	24,848	0.3
Name/Distance Checks	45	11,512	0.091

Complex Fire Checking

- Complex fire checking for fire events:
 - >50,000 acres
 - >6,000 acres with “complex” in fire name

Dup Check Type	# Fire Events Dropped	Acres Dropped	Consumption Dropped (10 ⁶ tons)
Fire Complexes	27	456,187	16.6
10k/Name Checks	27	24,848	0.3
Name/Distance Checks	45	3,254	0.04
<i>Total</i>	99	484,289	17.0

Perimeter Adjustments: Methods

- Adjusted final fire perimeters for unburned acres within the perimeter
- Based on:
 - Available GIS-based fire severity mapping
 - Reported unburned acreage (hardcopy)
- Applied to fire events >50,000 acres only

Dup Check Type	# Fire Events Dropped	Acres Dropped	Consumption Dropped (10 ⁶ tons)
Fire Perimeter		373,615	8.6

Perimeter Adjustments: Details

Fire Name	State	Perimeter Acres	Unburned Acres (%)	Blacked Acres	Reduction of Acres in EI
Biscuit	OR	499,570	23%	384,669	114,901
Rodeo/Chediski	AZ	468,638	15%	398,342	70,296
McNalley	CA	150,696	10%	135,626	15,070
Hayman	CO	137,760	20%	110,208	27,552
Rattle	UT	94,519	54%	43,479	51,040
Ponil Complex	NM	92,194	16%	77,443	14,751
Kraft Springs	MT	69,900	4%	67,104	2,796
Missionary Ridge	CO	66,534	20%	53,227	13,307
Sanford	UT	64,972	50%	32,486	32,486
Overall Acres		1,644,783	24% ± 17% (SD)	1,302,584	342,199
% WF EI Acres		26%		21%	5%

Other Adjustments: Methods

- Spatial
 - Checked Phase I EI fire locations against fire perimeter where GIS layer available: No location adjustments deemed necessary
- Temporal
 - No improvements made due to lack of better temporal data than already in Phase I EI
- Fuel Loading
 - Overlay of fire perimeters with NFDRS fuel model layer. Developed new weighted average fuel loading

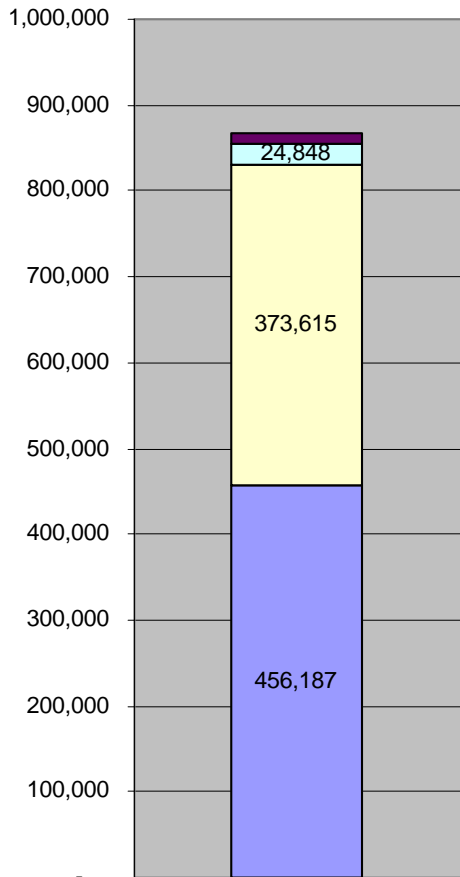
Dup Check Type	# Fire Events Dropped	Acres Dropped	Consumption Dropped (10 ⁶ tons)
Fuel Model Adjustments			40.4

Miscellaneous

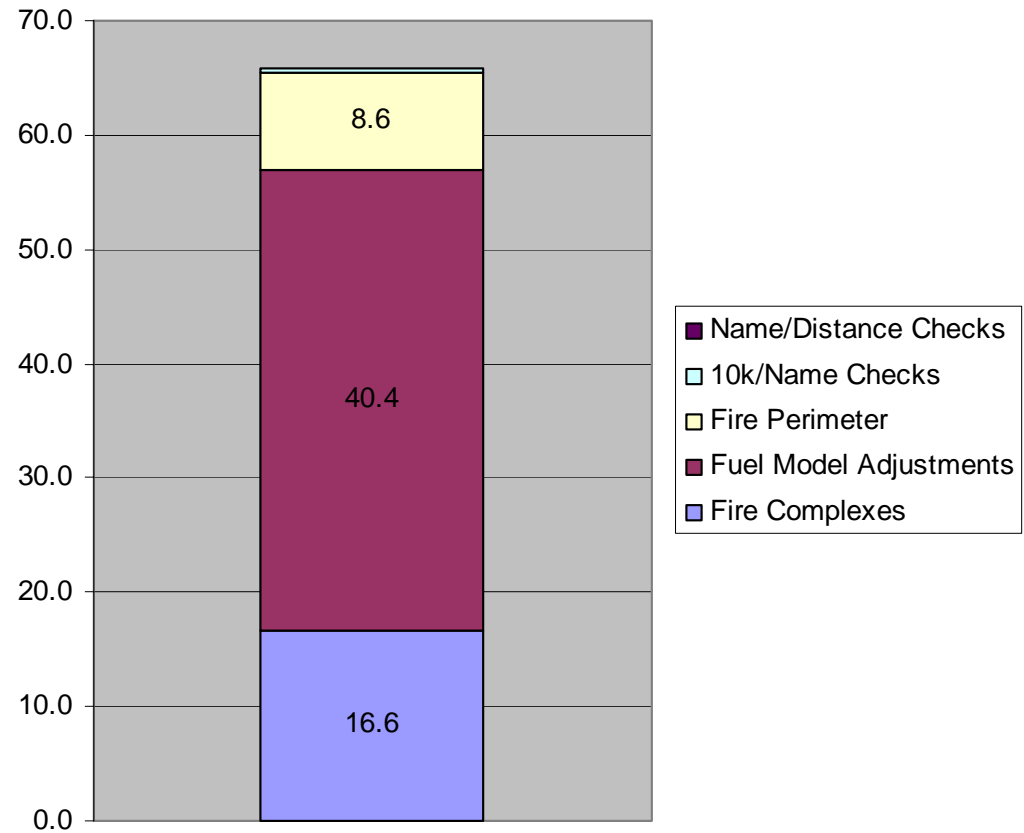
- Adjusted 14 Phase I wildfire events for formatting errors in latitude and longitude
- This created valid records and keeps these is Phase II EI
- Resulted in 414 additional acres only (<0.01% of total wildfire acres)

Summary

Acres Dropped



Consumption Dropped
Millions of Tons



Summary

Dup Check Type	# Fire Events Dropped	Acres Dropped	Consumption Dropped (10 ⁶ tons)
Phase 1 Totals	1,899	6,391,430	178.4
Fire Complexes	27	456,187	16.6
Fuel Model Adjustments			40.4
Fire Perimeter		373,615	8.6
10k/Name Checks	27	24,848	0.3
Name/Distance Checks	45	11,512	0.091
Total	99	866,162	66
Phase 2a Totals	1,800	5,525,268	112