

# Arizona 2011 NEI Comments

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Smoke Management  
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A-1 RX near Flagstaff, AZ

- Brief introduction to Arizona Smoke Management Program.
- How Arizona RX burn info are collected and used.
- Issues found with 2011 NEI
  - Prescribed Burns
  - Wildfires

## **Arizona has a certified Enhanced Smoke Management Program (est. 1996)**

- Elements of ESMP
  - Evaluation of Smoke Dispersion
  - Non-burning Alternatives
  - Public Notification of Burning
  - AQ Monitoring
  - Surveillance and Enforcement
  - Permitting
  - Regional Coordination (Regional Haze Rule)
  - Minimize PM<sub>2.5</sub> Emissions using Emission Reduction Techniques (ERTs) compiled by the Fire Emission Joint Forum (WRAP)

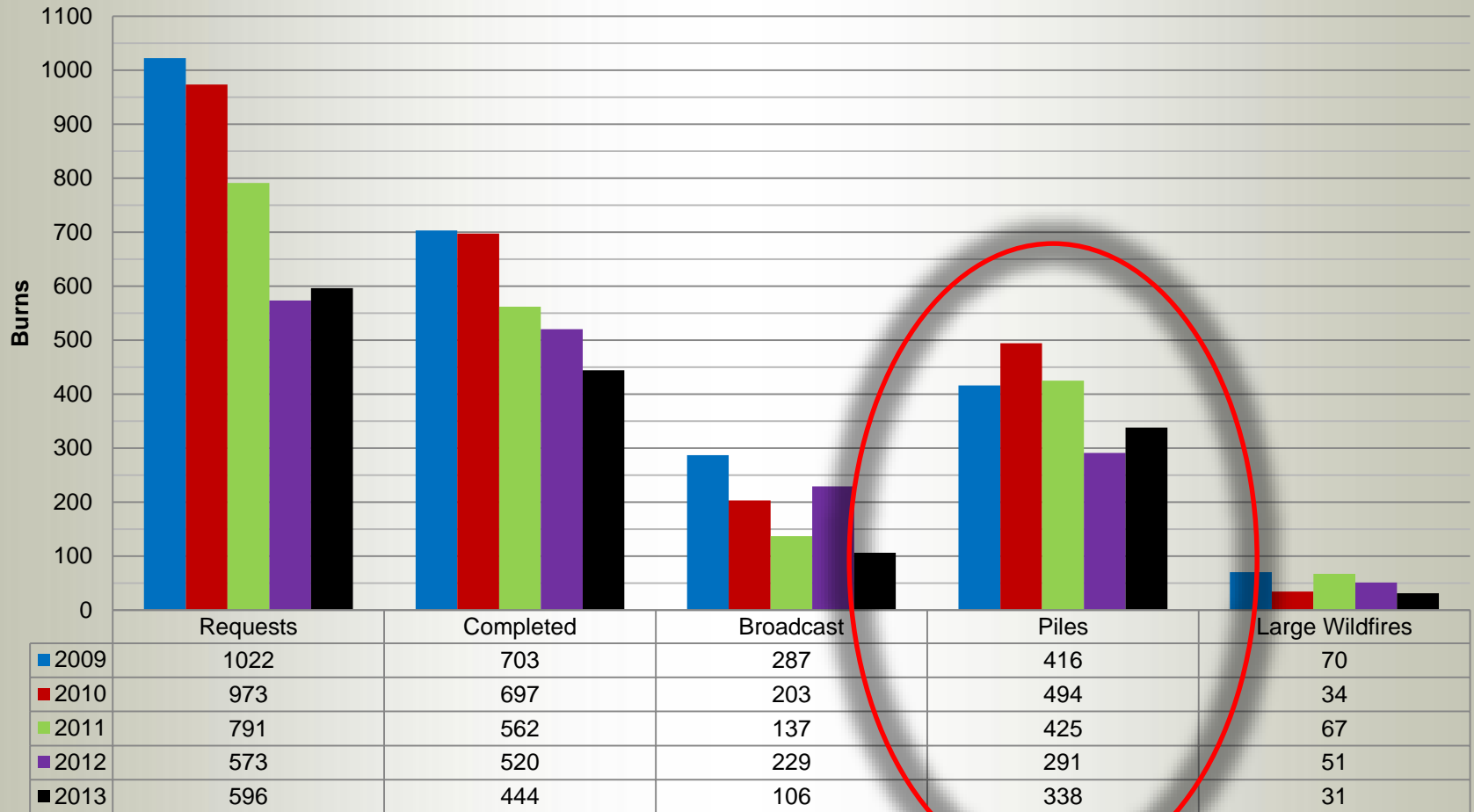
- **Federal and State Land Managers submit “Burn Accomplishment” forms for every completed RX burn:**
  - Ignition Date
  - Location
  - Fuel type and fuel loading (tons per acre)
  - Blackened Acreage
  - Fire Regime Condition Class known (Burn Forms)
  - Primary Emission Reduction Technique (ERTs)
- This allows us to compare RX burn data vs. reported NEI data.

# Prescribed Burn Issues

	A	B	C	D	E	F	G	H	I	J	K	
	Event ID	Name	Type	Begin	End	County	Lat	Lon	Area within perimeter (acres)	Fuel consumed (tons / acre)	PM2.5 Primary emissions (tons)	
1												
2	1331623-6433251720	Santa Catalina Fire	AF	1/5/2011	1/5/2011	4019	32.317	-110.814	1	0.432	0.003404	
3	ADEQ	Santa Catalina Piles		1/5/2011	1/5/2011		32.434	-110.763	1	15		D
4	1331602-6433251490	H/o Piles Fire	AF	1/6/2011	1/6/2011	4017	34.438	-110.61	20	2.02	0.360468	
5	1699812-6433251490	Nutri Fire	AF	1/6/2011	1/6/2011	4001	33.855	-109.201	25.8	14.5	4.46257	
6	1331599-6433251490	Pem Piles Fire	AF	1/6/2011	1/6/2011	4009	32.708	-109.928	6	11.6	0.802211	
7	1331606-6433251490	Pinion Pine Piles Fire	AF	1/6/2011	1/6/2011	4015	35.131	-113.924	15	2.01	0.266155	
8	1699815-6433251490	Ridge Machine Piles Fire	AF	1/6/2011	1/6/2011	4017	34.337	-110.28	102	3.4	4.49199	
9	1331603-6433251490	West Side Piles Fire	AF	1/6/2011	1/6/2011	4025	34.479	-112.082	50	3.95	1.53442	
10	ADEQ	Pine Lake Piles		1/6/2011	1/6/2011		35.101	-113.889	15	6		A
11	1331710-6433249650	South Side Piles Fire	AF	1/14/2011	1/14/2011	4005	35.186	-112.221	122	3.26	3.95152	
12	ADEQ	South Side Piles		1/14/2011	1/14/2011		35.228	-112.133	122	12		D
13	1491303-6432400950	Big Bug Fire	NF	8/1/2011	8/1/2011	4025	34.391	-112.221	0.994	4.02	0.031064	
14	1334601-6432400950	Sr Piles Fire	AF	8/1/2011	8/1/2011	4005	36.014	-112.129	1.5	8.07	0.165909	
15	ADEQ	North Rim Piles		8/1/2014	8/1/2011		36.315	-112.1	1	7		A
16	1338368-6432154620	Watson Fire	AF	10/14/2011	10/14/2011	4005	35.999	-112.04	5620	7.35	574.219	
17	ADEQ	Watson RX		10/14/2011	10/14/2011		35.984	-112.021	750			C
18	1778546-6432153470	Gov.prairie Fire	AF	10/19/2011	10/19/2011	4005	35.351	-111.871	200	7.95	21.7401	
19	ADEQ	Government Prairie		10/19/2011	10/19/2011		35.348	-111.87	200			Matched
20	1778545-6432153470	Aps Powerline Fire	AF	10/19/2011	10/19/2011	4005	34.694	-111.167	193	0.667	1.01815	
21	1778539-6432153470	Aps Powerline Fire	AF	10/19/2011	10/19/2011	4005	34.692	-111.113	193	8.42	22.0524	
22	1778544-6432153470	Aps Powerline Fire	AF	10/19/2011	10/19/2011	4005	34.686	-111.137	96.4	8.42	11.0262	
23	ADEQ	APS Powerline		10/19/2011	10/19/2011		34.688	-111.099	375			B and C
24	1779325-6432153240	Unnamed fire in Coconino County, Arizona	AF	10/20/2011	10/20/2011	4005	35.382	-111.982	178	7.41	18.3285	
25	ADEQ	Spring Valley		10/20/2011	10/20/2011		35.387	-111.991	179			Matched
26	1779339-6432153240	Aps Powerline Fire	AF	10/20/2011	10/20/2011	4005	34.669	-111.1	96.4	8.42	11.0262	
27	1779321-6432153240	Aps Powerline Fire	AF	10/20/2011	10/20/2011	4005	34.677	-111.124	96.4	8.42	11.0262	
28	ADEQ	APS Powerline		10/20/2011	10/20/2011		34.674	-111.098	300			B and C
29	1340001-6432150710	Grapevine Rx Fire	AF	10/31/2011	10/31/2011	4015	34.855	-113.836	150	12	14.2873	
30	ADEQ	Grapevine Rx		10/31/2011	10/31/2011		34.855	-113.845	150			Matched
31	1782760-6432150710	Beecher Fire	AF	10/31/2011	10/31/2011	4015	34.786	-113.878	220	12	20.9547	
32	1782761-6432150710	Beecher Fire	AF	10/31/2011	10/31/2011	4015	34.784	-113.854	110	2.38	2.36265	
33	ADEQ	Beecher RX		10/31/2011	10/31/2011		34.798	-113.8	1100			C
34	1782767-6432150710	Victorine Fire	AF	10/31/2011	10/31/2011	4005	34.552	-111.089	67.6	8.42	7.73516	
35	ADEQ	Victorine		10/31/2011	10/31/2011		34.529	-111.099	50			C
36	1346053-6431911740	Alpine Wui Fire	AF	12/12/2011	12/12/2011	4001	33.828	-109.153	15	2.11	0.341845	
37	ADEQ	Alpine Wui Fire		12/12/2011	12/12/2011		33.856	-109.133	15	10		D

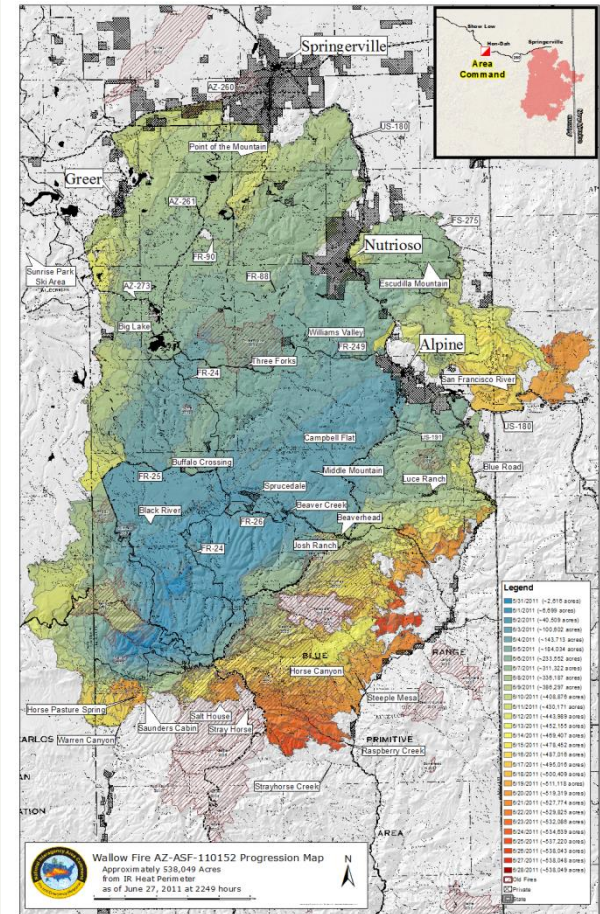
- A. Not listed in 2011 NEI...
  - B. Multiple daily listing...
  - C. Accuracy of acreage...
  - D. Accuracy of fuel loading...
- What is causing some burns to be reported accurately and not others?
  - How does NEI distinguish between Pile vs. Broadcast Burning?
  - NEI seems to greatly underestimate fuel loading for Piles!

# Arizona Burn Activity (2009-2013)



# Wallow Fire Discrepancies (5-29-2011 to 7-8-2011)

	A	B	C	D	E	F	G	H	I	J	K
1	Event ID	Name	Type	Begin	End	County	Lat	Lon	Area within perimeter (acres)	Fuel consumed (tons / acre)	PM2.5 Primary emissions (tons)
2	1746902-6432882800	Wallow Fire	NF	4/22/2011	4/22/2011	4011	33.557	-109.1	56.6	12.3	8.46617
3	1746528-6432882570	Wallow Fire	NF	4/23/2011	4/23/2011	4011	33.537	-109.1	56.6	9.76	4.98355
4	1750133-6432763890	Wallow Fire	NF	5/10/2011	5/10/2011	4001	33.913	-109.4	121	1.86	1.75121
5	1750121-6432763890	Wallow Fire	NF	5/10/2011	5/10/2011	4001	33.917	-109.5	74.4	42.6	36.3922
6	1752549-6432760210	Wallow Fire	NF	5/26/2011	5/26/2011	4011	33.034	-109.1	64.7	5.2	3.16406
7	1753256-6432759520	Wallow Fire	NF	5/29/2011	5/29/2011	4009	33.608	-109.5	339	9.73	29.745
8	1753261-6432759520	Wallow Fire	NF	5/29/2011	5/29/2011	4011	33.659	-109.4	396	9.76	34.8848
9	1753274-6432759520	Wallow Fire	NF	5/29/2011	5/29/2011	4011	33.633	-109.4	170	12.6	22.3081
10	1753257-6432759520	Wallow Fire	NF	5/29/2011	5/29/2011	4011	33.591	-109.5	372	9.76	32.749
11	1753258-6432759520	Wallow Fire	NF	5/29/2011	5/29/2011	4011	33.645	-109.4	849	9.76	74.7533
12	1753752-6432759290	Wallow Fire	NF	5/30/2011	5/30/2011	4011	33.605	-109.5	1450	9.76	127.721
13	1753753-6432759290	Wallow Fire	NF	5/30/2011	5/30/2011	4011	33.656	-109.4	2260	9.76	199.342
14	1753755-6432759290	Wallow Fire	NF	5/30/2011	5/30/2011	4011	33.678	-109.4	74.4	42.6	36.3922
15	1753449-6432759060	Wallow Fire	NF	5/31/2011	5/31/2011	4011	33.647	-109.4	113	9.4	9.56898
16	1753448-6432759060	Wallow Fire	NF	5/31/2011	5/31/2011	4011	33.598	-109.4	446	9.4	37.7292
17	1754098-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4011	33.648	-109.5	56.6	9.73	4.95749
18	1754132-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4011	33.628	-109.4	297	27.1	93.6688
19	1754097-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4011	33.61	-109.5	74.4	20.8	17.869
20	1754134-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4001	33.75	-109.4	56.6	12.3	8.46617
21	1754093-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4011	33.59	-109.5	260	9.78	22.9833
22	1754101-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4001	33.734	-109.4	113	12.4	17.0326
23	1754118-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4011	33.691	-109.3	74.4	42.7	36.5184
24	1754133-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4011	33.718	-109.4	339	12.4	51.0978
25	1754095-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4011	33.68	-109.4	56.6	9.78	4.99637
26	1754102-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4011	33.583	-109.4	112	42.7	54.7775
27	1754138-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4011	33.703	-109.3	56.6	9.78	4.99637
28	1754094-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4011	33.658	-109.4	1980	9.78	174.873
29	1754100-6432644290	Wallow Fire	NF	6/1/2011	6/1/2011	4011	33.704	-109.4	170	9.78	14.9891



## A. Wallow Fire started in April?

- Additional 54.75 tons of PM<sub>2.5</sub> in NEI

## B. Accuracy of acreage?

- June 1<sup>st</sup> (4083 ac. reported by IR heat perimeter vs. 3646.2 ac. in NEI)

## C. Duplication of data entries?

# Questions or Comments?

## Wildfire and Prescribed Burn Events in Arizona from the 2011 NEI v1

