National Fire Weather Report





2014

By

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NOAA/NWS Incident Meteorologist Program: 2014 Summary

For a summary of 2014 fire season from the National Interagency Fire Center, please see: http://www.predictiveservices.nifc.gov/intelligence/2014_Statssumm/2014Stats&Summ.html

Calendar year 2014 was below average for Incident Meteorologist (IMET) dispatches. The 2014 season was only the 2nd season since 2000 where there were less than 20 IMET missions prior to 7/1 (the other year being 2009). Moderating conditions were seen in mid-August bringing IMET activity well below normal for much of the remaining season.

There were several large campaign fires in 2014 in Medford, OR, Spokane, WA, and Eureka, CA, areas including the Happy Camp Complex, July Complex, Deception Complex, and Carlton Complex. In total the NWS had 105 missions supporting 77 different incidents.

IMET Missions 2014

IMET Home Office	County Warning Area	Incident Location, State	Dispatch	Return	Days
Thompson Oxnard, CA	LOX	Colby Fire near Glendora, CA	1/17/14	1/22/14	6
Haner Seattle, WA	SEW	SR 530 Slide near Oso, WA	3/29/14	4/10/14	13
Cerniglia Tucson, AZ	TWC	Brown Fire near Sierra Vista, AZ	4/15/14	4/20/14	6
Ippoliti Miami, FL	MFL	Orange Blossom Fire near Ft. Lauderdale, FL	4/27/14	5/1/14	5
Wachter Albuquerque, NM	EPZ	Signal Fire near Silver City, NM	5/12/14	5/23/14	12
Thompson Oxnard, CA	LOX	Miguelito Fire near Santa Barbara, CA	5/14/14	5/14/14	1
Thompson Oxnard, CA	SGX	San Diego Complex near Escondido, CA	5/15/14	5/18/14	4
Stubblefield Flagstaff, AZ	FGZ	Slide Fire near Sedona, AZ	5/21/14	5/31/14	11
Sedlock (T) Melbourne, FL			5/26/14	5/31/14	6
Berg Fairbanks, AK	AFC	Funny River Fire near Soldotna, AK	5/22/14	6/5/14	15
Smith Sacramento, CA	HNX	Hunter Fire near Coulterville, CA	5/28/14	5/30/14	3
Ruthford Charleston, WV	AFG	100 Mile Creek Fire near Big Delta, AK	6/10/14	6/20/14	11
Cassell (T) Anchorage, AK			6/10/14	6/20/14	11
Wachter Albuquerque, NM	ABQ	Assayi Lake Fire near Crystal, NM	6/15/14	6/26/14	12

IMET Home Office	County Warning Area	Incident Location, State	Dispatch	Return	Days
Tonkin Eureka, CA	HNX	Shirley Fire near Lake Isabella, CA	6/16/14	6/20/14	5
Thompson Oxnard, CA	FGZ	San Juan Fire near Show Low, AZ	6/28/14	7/6/14	9
Harris Fort Worth, TX	PUB	8 Mile Fire near Cañon City, CO	6/29/14	7/2/14	4
Wachter Albuquerque, NM	ABQ	Diego Fire near Coyote, NM	6/30/14	7/7/14	8
Harty Hanford, CA	HNX	Ranch Fire near Lake Isabella, CA	7/2/14	7/9/14	8
Hoon Reno, NV	REV	Coleman Fire near Fort Bidwell, CA	7/3/14	7/8/14	6
Lutz Medford, OR	MFR	Modoc July Complex near Newell, CA	7/7/14	7/10/14	4
Clapp Sacramento, CA	STO	Monticello Fire near Winters, CA	7/7/14	7/11/14	5
Carter Spokane, WA	OTX	Mills Canyon Fire near Entiat, WA	7/10/14	7/11/14	2
Tobin Spokane, WA			7/11/14	7/25/14	15
Thimmesch (T) Boise, ID	ΟΤΧ	Chiwaukum Complex (in conjunction with Mills C near Leavenworth, WA	7/17/14 Canyon)	7/31/14	15
Pelton Jackson, KY			7/23/14	8/6/14	15
Quagliariello Charleston, SC			8/5/14	8/17/14	13
Simosko (T) Bismarck, ND			8/4/14	8/18/14	15

IMET Home Office	County Warning Area	Incident Location, State	Dispatch	Return	Days
Hooper Paducah, KY	ΟΤΧ	Chiwaukum Complex (cont.) Near Leavenworth, WA	8/16/14	8/29/14	14
Enyedi (T) Jacksonville, FL			8/15/14	8/29/14	15
Harty Hanford, CA	HNX	Nicolls Fire near Ridgecrest, CA	7/12/14	7/17/14	6
Smith Sacramento, CA	STO	Bully Fire near Redding, CA	7/12/14	7/21/14	10
Bunnag Medford, OR	PDT	Shaniko Butte Fire near Warm Springs, OR	7/16/14	7/26/15	11
Survick Pocatello, ID	BOI	Whiskey Complex near Garden Valley, ID	7/16/14	7/28/14	13
Haner Seattle, WA	BOI	Buzzard Complex near Riverside, OR	7/16/14	7/28/14	13
Colton Grand Junction, CO			7/19/14	7/23/14	5
Weishaar Portland, OR	PDT	Waterman Complex near Mitchell, OR	7/16/14	7/27/14	12
Tonkin Eureka, CA	PQR	Bingham Complex near Marion Forks, OR	7/16/14	7/20/14	5
Wolf Spokane, WA	OTX	Carlton Complex near Twisp, WA	7/16/14	7/31/14	16
Bieda (T) Pendleton, OR			7/20/14	7/31/14	12
Hoenisch Great Falls, MT			7/20/14	7/31/14	12
Struthwolf Salt Lake City, UT			7/21/14	8/2/14	13
Barron Tampa, FL			7/29/14	8/12/14	15

IMET Home Office	County Warning Area	Incident Location, State	Dispatch	Return	Days
Hoenisch Great Falls, MT	PDT	Pittsburg Fire near Riggins, ID	7/17/14	7/20/14	4
Szatanek Elko, NV	PDT	Sunflower Fire near Monument, OR	7/17/14	7/25/14	9
Wallmann Reno, NV	PDT	Bridge 99 Complex near Sisters, OR	7/18/14	7/28/14	11
Dudley (T) Hanford, CA			7/20/14	7/28/14	9
Carpenter Western Region HQ	PDT	Pine Creek Fire near Fossil, OR	7/18/14	7/24/14	7
Van Speybroeck Southern Region HQ	PDT	Logging Unit Complex near Warm Springs, OR	7/19/14	8/1/14	14
Byrd Jackson, MS			7/31/14	8/8/14	9
Tonkin Eureka, CA	PDT	Ochoco Complex near Prineville, OR	7/20/14	7/30/14	11
Leach (T) Missoula, MT			7/21/14	7/29/14	9
Kriederman Boulder, CO	SLC	Simpson Complex near Vernon, UT	7/24/14	7/27/14	4
Carpenter Western Region HQ	BOI	Kitten Complex near Ironside, OR	7/25/14	7/31/14	7
Loeffelbein Western Region HQ	SLC	Levan Fire near Levan, UT	7/25/14	7/31/14	7
Dumont Elko, NV	LKN	Bear Trap Fire near Warm Springs, NV	7/26/14	8/1/14	7
Walbrun Monterey, CA	HNX	El Portal Fire near El Portal, CA	7/28/14	8/5/14	9

IMET Home Office	County Warning Area	Incident Location, State	Dispatch	Return	Days
Clapp Sacramento, CA	HNX	French Fire near North Fork, CA	7/28/14	8/6/14	10
Walbrun Monterey, CA			8/5/14	8/10/14	6
Dudley (T) Hanford, CA			8/6/14	8/10/14	5
Bunnag Medford, OR	MFR	Day Fire near Day, CA	8/1/14	8/8/14	8
Thompson Oxnard, CA	EKA	Lodge Complex near Laytonville, CA	8/1/14	8/15/14	15
Dudley (T) Hanford, CA			8/10/14	8/18/14	9
Cassell Anchorage, AK			8/15/14	8/18/14	5
Weishaar Portland, OR	PQR	Staley Complex near Oakridge, OR	8/2/14	8/16/14	15
Van Speybroeck Southern Region HQ			8/14/14	8/28/14	15
Moore Pueblo, CO		Deception Complex (took over Staley)	8/27/14	9/11/14	16
Thimmesch (T) Boise, ID			8/30/14	9/14/14	16
Lewis Charleston, WV			9/9/14	9/14/14	6
Borsum Billings, MT			9/13/14	9/21/14	9
Weishaar Portland, OR			9/24/14	10/3/14	10
Messick Pocatello, ID	STO	Bald Fire near Fall River Mills, CA	8/2/14	8/11/14	10
Hoon Reno, NV	EKA	Coffee Fire near Trinity Center, CA	8/2/14	8/12/14	11

IMET Home Office	County Warning Area	Incident Location, State	Dispatch	Return	Days
Redman Boise, ID	PDT	South Fork Complex near John Day, OR	8/2/14	8/16/14	15
Lebo Wilmington, NC			8/14/14	8/23/14	10
Lutz Medford, OR	MFR	Beaver Complex near Ashland, OR	8/2/14	8/5/14	4
Leach Missoula, MT			8/5/14	8/12/14	8
Borsum Billings, MT	MFR	SKU Lightning Complex near Yreka, CA	8/3/14	8/14/14	12
Haner Seattle, WA	MFR	KNF Beaver Fire near Horse Creek, CA	8/3/14	8/18/14	16
Sedlock (T) Melbourne, FL			8/7/14	8/21/14	15
Fox Spokane, WA	MFR	July Complex near Sawyers Bar, CA	8/4/14	8/19/14	16
Byrd Jackson, MS			8/17/14	8/31/14	15
Keene (T) Medford, OR			8/22/14	8/30/14	9
Sullivan San Diego, CA			8/29/14	9/13/14	16
Tonkin Eureka, CA	MFR	Camp Creek Complex near Medford, OR	8/4/14	8/8/14	5
Hoenisch Great Falls, MT	OTX	Big Cougar Fire near Lewiston, ID	8/4/14	8/16/14	13
Szatanek Elko, NV	STO	Eiler Fire near Burney, CA	8/5/14	8/16/14	12

IMET Home Office	County Warning Area	Incident Location, State	Dispatch	Return	Days
Tobin Spokane, WA	OTX	Little Bridge Creek Fire near Winthrop, WA	8/6/14	8/19/14	14
Finch (T) Cheyenne, WY			8/14/14	8/22/14	9
Cassell Anchorage, AK			8/19/14	8/24/14	6
Ruthford Charleston, WV	OTX	Devils Elbow Complex near Nespelem, WA	8/7/14	8/20/14	14
Goudsward Little Rock , AR	PDT	5 Mile Fire near Imnaha, OR	8/7/14	8/22/14	16
Byrd Jackson, MS	PDT	Bald Sisters Fire near Prairie City, OR	8/8/14	8/14/14	7
Graning Duluth, MN			8/13/14	8/21/14	9
Nester Missoula, MT	MSO	Thompson River Complex near Thompson Falls, MT	8/9/14	8/19/14	11
Kriederman Boulder, CO	MSO	Johnson Bar Fire near Kooskia, ID	8/10/14	8/25/14	16
Gilchrist Glasgow, MT	OTX	Snag Canyon Fire near Ellensburg, WA	8/11/14	8/24/14	14
Carpenter Western Region HQ	BOI	Timber Butte Fire near Boise, ID	8/12/14	8/14/14	3

IMET Home Office	County Warning Area	Incident Location, State	Dispatch	Return	Days
Leach Missoula, MT	MFR	Happy Camp Complex near Happy Camp, CA	8/13/14	8/19/14	7
Tonkin Eureka, CA			8/18/14	9/1/14	15
Walbrun Monterey, CA			8/25/14	9/9/14	16
Keene (T) Medford, OR			8/31/14	9/4/14	5
Reedy Seattle, WA			9/3/14	9/5/14	3
Bonk Portland, OR			9/4/14	9/19/14	16
Gorelow (T) Las Vegas, NV			9/9/14	9/15/14	7
Shallenberger (T) Jackson, KY			9/15/14	9/29/14	15
Davis Tampa, FL			9/17/14	9/29/14	13
Walbrun Monterey, CA	HNX	Way Fire near Wofford Heights, CA	8/19/14	8/24/14	6
Wallmann Reno, NV	HNX	Junction Fire near Oakhurst, CA	8/19/14	8/20/14	2
Lutz Medford, OR	MFR	790 Fire near Medford, OR	8/29/14	9/13/14	16
Redman Boise, ID			9/11/14	9/17/14	7
Smith Sacramento, CA	PQR	Yellow Point Fire near Cottage Grove, OR	9/7/14	9/13/14	7
Hoon Reno, NV	HNX	Meadow Fire near Yosemite Valley, CA	9/8/14	9/16/14	9

IMET Home Office	County Warning Area	Incident Location, State	Dispatch	Return	Days
Tonkin Eureka, CA	EKA	Bald Hill 3 Fire near Hoopa, CA	9/14/14	9/17/14	4
Bunnag Medford, OR	MFR	Onion Mountain Fire near Medford, OR	9/14/14	9/26/14	13
Survick Pocatello, ID	PQR	36 Pit Fire near Estacada, OR	9/16/14	9/25/14	10
Walbrun Monterey, CA	REV	June Fire near Mammoth Lakes, CA	9/19/14	9/21/14	3
Clapp Sacramento, CA	STO	King Fire near Placerville, CA	9/15/14	9/30/14	16
Simosko Bismarck, ND			9/20/14	10/5/14	16
Mehle Monterey, CA			10/3/14	10/8/14	6
Wachter Albuquerque, NM	PDT	Freezeout Ridge Fire near Joseph, OR	9/20/14	9/28/14	9
Graning Duluth, MN	DLH	Coo Lake Rx near Ely, MN	9/25/14	9/28/14	4

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YEAR	FIRES	ACRES	IMET DISPATCHES	IMET DAYS	IMET HOURS
<i>1987</i>	143,877	4,152,575	83	587	8,218
<i>1988</i>	154,573	7,398,889	117	912	12,768
<i>1989</i>	121,714	3,261,732	57	344	4,816
1990	122,763	5,452,874	38	264	3,696
1991	116,953	2,237,714	27	171	2,394
1992	103,830	2,457,665	45	261	3,654
1993	97,031	2,310,420	15	89	1,246
1994	114,049	4,724,014	115	954	13,356
1995	130,019	2,315,730	27	201	2,814
1996	115,025	6,701,390	104	781	10,934
1997	89,517	3,672,616	15	94	1,316
<i>1998</i>	81,043	2,329,709	88	951	13,314
1999	93,702	5,661,976	74	553	7,742
2000	122,827	8,422,237	206	1,565	21,910
2001	84,079	3,555,138	113	924	12,936
2002	88,458	6,937,584	172	1,490	20,860
2003	85,943	4,918,088	152	1,406	19,684
2004	77,534	6,790,692	96	662	9,268
2005	66,552	8,686,753	97	794	11,116
2006	96,385	9,873,745	208	1,920	26,880
2007	85,822	9,321,326	185	1,947	27,258
2008	80,094	5,254,109	171	1,781	24,934
2009	78,792	5,921,786	71	680	9,520
2010	71,971	3,422,724	80	759	10,626
2011	74,126	8,711,367	147	1,678	23,492
2012	67,774	9,326,238	170	1,677	23,478
2013	47,579	4,319,546	127	1,215	14,010
2014	63,212	3,595,613	105	1,023	14,322
'88 - '14 Average	95,548	5,419,080	104	907	12,699
'04 - '13 Average	73,241	6,843,321	137	1,360	19,039

IMET Incident Response Summary

Table 1. Years highlighted in gold are the top 3 years in terms of acres burned. Years highlighted in gray are the bottom 3 years in terms of acres burned.

2014 Statistics

The number of acres burned and associated IMET missions have been on the rise since the mid 1990's. The chart below shows the upward trend in the last 20 years.

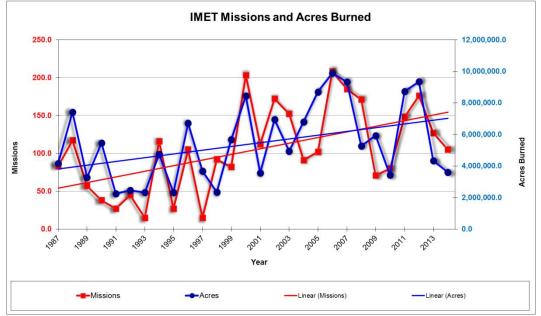


Chart 1. IMET missions and acres burned from 1987 through 2014.

In 2014, IMET dispatches were below average.

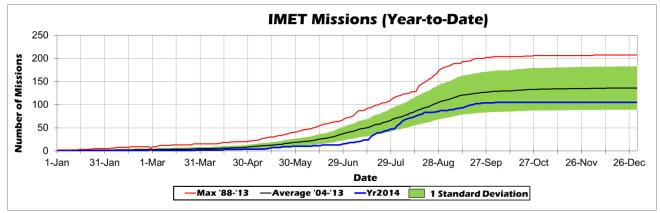


Chart 2. Cumulative IMET missions for 2014.

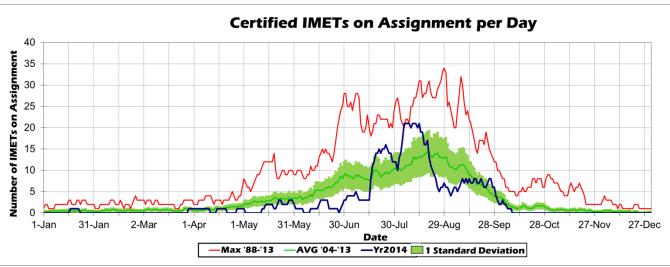


Chart 3. Number of IMETs on assignment each day of 2014.

IMET response time is very important to NWS IMET program users. They prefer that the NWS provide IMETs from close-by and within 24 hours of the request for services. This matches expectations of their own incident overhead personnel. The NWS is meeting or exceeding wildland fire agencies' requirement in both distance and time.

Average Distance From IMET Office to Fire	573 miles
Median Distance From IMET Office to Fire	294 miles

Table 2. Average and median distance from an IMET's office to an incident in 2014.

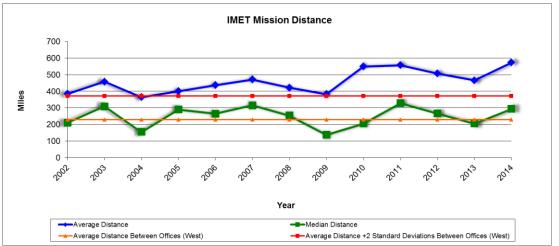


Chart 4. Average and Median Distance from IMET's office to incident since 2002.

Average Time For IMET Dispatch	16.4 hours			
Median Time for IMET Dispatch	17.6 hours			
Note: The dispatch times for swap outs are defaulted to "0" hours because there is no wait time on the part of the incident team since an IMET is already on site.				

Table 3. 2014 Average and Median time between IMET request and IMET arrival on site.

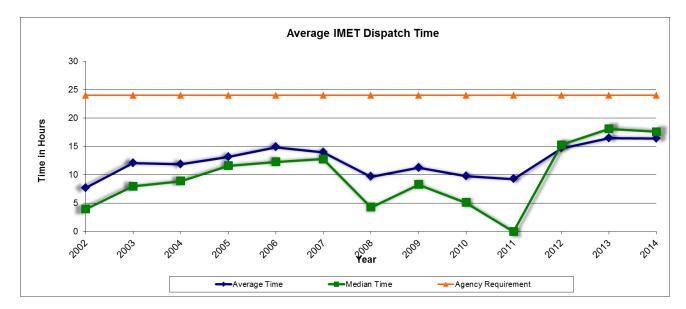


Chart 5. Average and median IMET dispatch times since 2002.

2014 Statistics		Notes
Average Number of Dispatches per IMET	1	
Average Number of Days per Dispatch	13	
Percentage of Dispatch Requests Filled	100%	Every request that was received by the National Fire Weather Operations Coordinator (NFWOC) in Boise was filled.
Number of Trainees Completing Training	6	Alaska Region: 1 Central Region: 2 Southern Region: 1 Western Region: 2

Table 4. Dispatch numbers and days per IMET. Also percentage of requests filled and number of trainees certified in 2014.

The majority of IMETs dispatched in 2014 were from the Western Region.

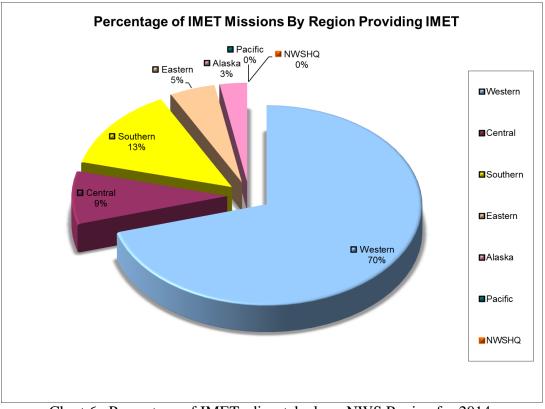


Chart 6. Percentage of IMETs dispatched per NWS Region for 2014.

The majority of incidents over the previous 10 years have been in Western Region.

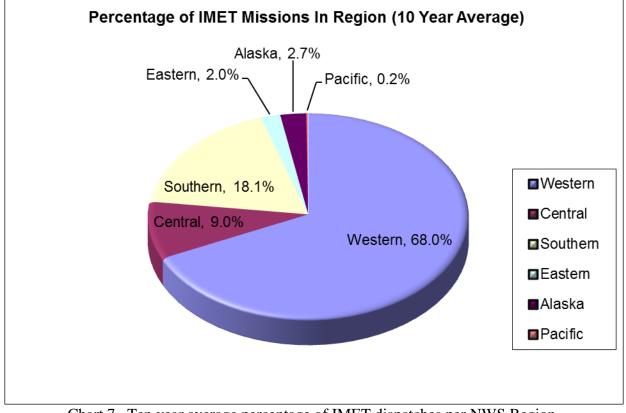


Chart 7. Ten year average percentage of IMET dispatches per NWS Region.

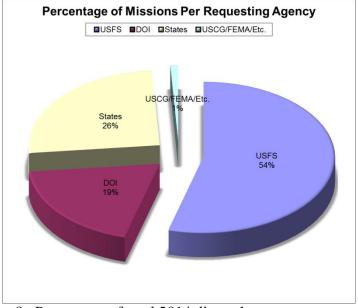


Chart 8. Percentage of total 2014 dispatch requests per agency.

While support for incidents mainly comes from within the same NWS region, there is cooperation between the regions with mutual support. Table 5 shows the within region support and the support external to each region for 2014.

Region	Percentage of Incidents Within Region Covered By Own IMETs	Actual Number	Percentage of Incidents Where IMETs Sent To Another Region to Cover	Actual Number
Western	77%	75 of 97	0%	0
Central	50%	1 of 2	33%	8
Southern	100%	4 of 4	38%	9
Eastern		0 of 0	21%	5
Alaska	50%	1 of 2	8%	2
Pacific		0 of 0	0%	0
NWS HQ			0%	0

Table 5. IMET support within regions and external to regions for 2014.

Each region of the United States in unique in its fire seasons. These differences are dependent on the fuels available and the climate. The peak fire season times are listed in Table 6 for each NWS region.

Western Region	15 Jun – 15 Sep	
Central Region	1 Jun – 15 Sep	
Southern Region	1 May – 15 Jul	
Eastern Region	1 Jun – 31 Jul, 15 Oct – 15 Nov	
Alaska Region	25 May – 15 Aug	
Pacific Region	None	
Nationally	1 May – 30 Sep	

Table 6. Peak fire seasons for each NWS Region.

2014 National Red Flag Warning Verification

NWS offices nationwide issue Red Flag Warnings (RFW) for expected severe fire weather conditions. Table 7 summarizes the verification statistics for 2014 for red flag warnings.

Region	POD	FAR	CSI	Lead Time (hrs)	Number RFWs Issued	Spot Forecasts
Western Region	0.93	0.27	0.69	21.06	1,356	8,253
Central Region	0.92	0.24	0.72	14.33	2,885	4,152
Eastern Region	0.90	0.28	0.66	8.41	580	1,770
Southern Region	0.85	0.23	0.67	12.79	4,826	5,710
Alaska Region	0.95	0.28	0.70	13.06	166	190
Pacific Region	N/A	N/A	N/A	N/A	N/A	N/A
National	0.88	0.24	0.69	14.04	9,813	20,075

Table 7. POD = Probability of Detection; FAR = False Alarm Rate; CSI = Critical Success Index.

The national performance standard for 2014 was:

POD	0.88	
Lead Time	10.50 hours	

Table 8. 2014 national performance standards.

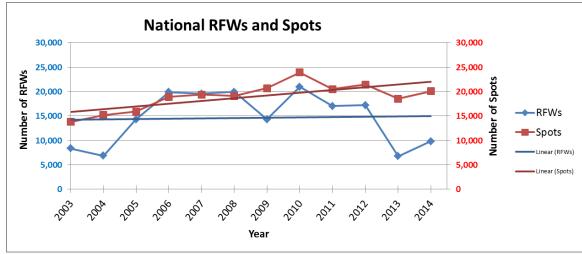


Chart 8. Number of Red Flag Warnings and Spot forecasts issued annually by the NWS since 2003.

The following are the red flag warning national performance standards for the next 5 years:

Year	POD	Lead Time (hours)
2015	0.89	10.55
2016	0.89	10.55
2017	0.90	10.60
2018	0.90	10.60
2019	0.91	10.65

Table 10. NWS fire weather program national performance standards for the next 5 years for red flag warnings.

NWS IMETs utilize specialized equipment to provide their support at incidents called "All Hazard Meteorological Response System" (AMRS). This equipment allows the IMET to set up a virtual Weather Forecast Office (WFO) remotely, including capability to gather and interpret model data, satellite and radar data, upper air radiosonde and surface observations. It also allows for an in-depth analysis of these data to support provision of forecasts, watches and warnings on site at an incident. The NWS has 70 AMRS located at WFOs across the nation, mainly in areas where wildland fire is a threat. Some stations have more than one unit reflecting those areas that are most prone to a wildfire threat and have multiple IMETs on site to deploy to these incidents. The AMRS locations (and the IMETs that use them) are shown below in figure 1.

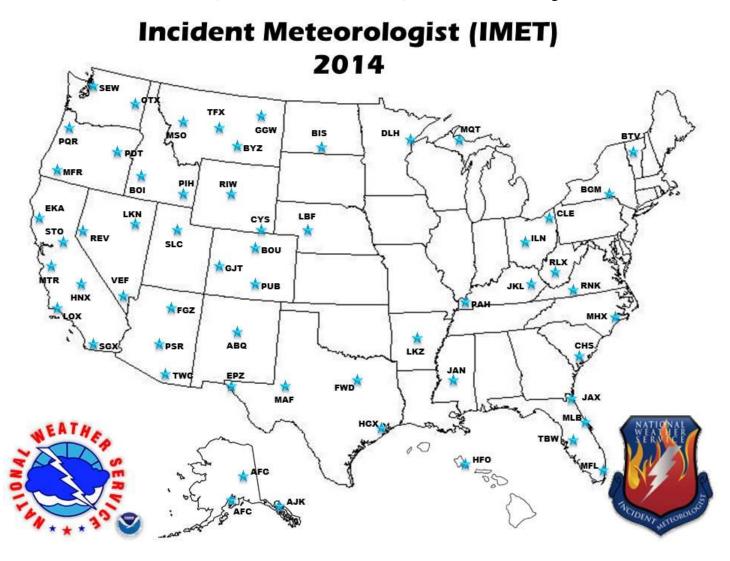


Figure 1. Home location of NWS All Hazard Meteorological Response Systems (AMRS) and their associated IMETs.