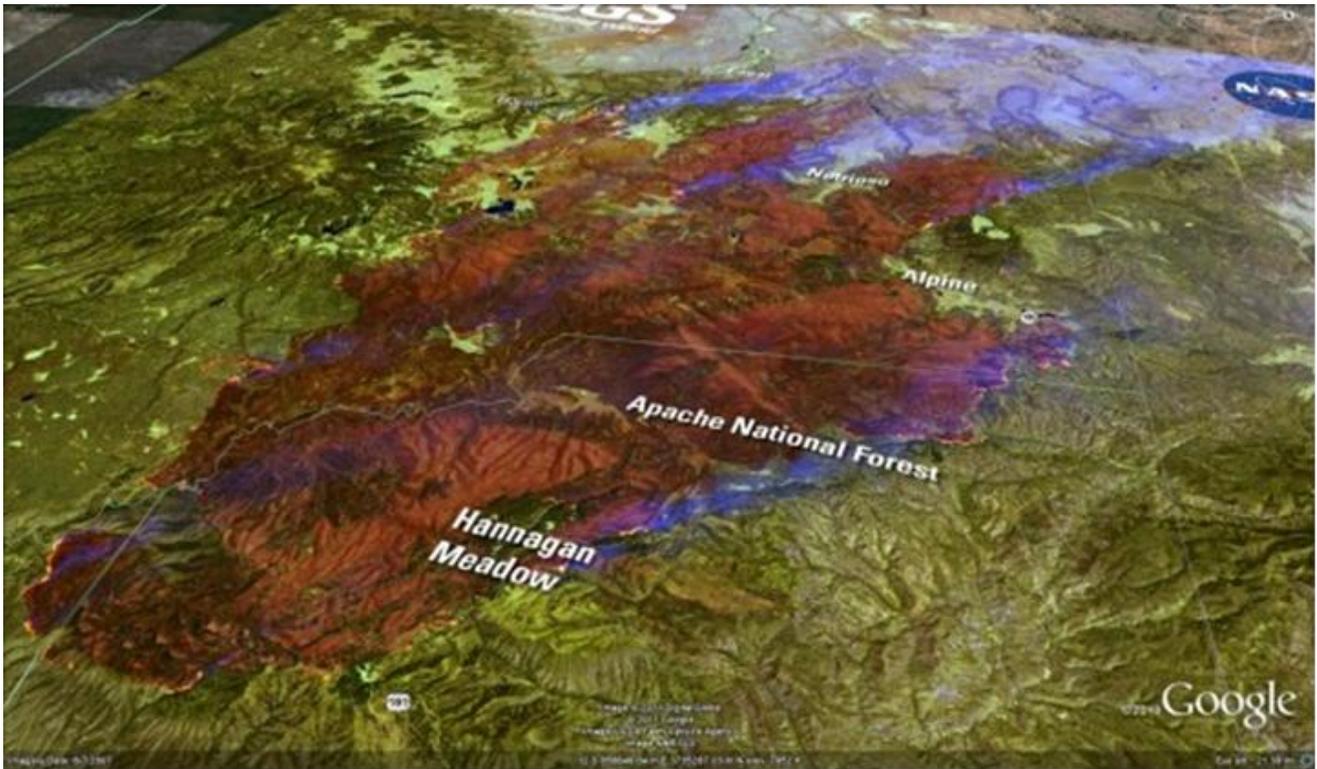


**2011 ANNUAL FIRE WEATHER REPORT**  
**NATIONAL WEATHER SERVICE FORECAST OFFICE**  
**FLAGSTAFF ARIZONA**



*(Wallow Fire in June)*

01 January 2012

MEMORANDUM FOR: W/WR1x3 – Roger Lamoni  
FROM: Robert Bohlin/ FGZ FWX Program Manager  
THROUGH: Brian Klimowski/ FGZ MIC  
SUBJECT: Annual Fire Weather Report for 2011

## 1. OVERVIEW

2011 will go down as another historic wildfire season for the state of Arizona. A drought across eastern Arizona through much of the winter and spring helped set the stage for the Wallow fire, which eventually became the largest fire in state history. The Wallow Fire began on May 29<sup>th</sup> as an abandoned campfire that burned over 522,642 Arizona acres in 35 days.

For the second year in a row, the Flagstaff forecast office had to quickly transition from large wildfire support to flash flood operations in support of communities near the burn area. Our Warning Coordination Meteorologist George Howard held several meetings in the White Mountains with the BAER team and affected local communities to discuss future hydrological impacts of the Wallow burn area for the upcoming summer monsoon season. Local flash flood advisory and warning thresholds were quickly established for operations and maps were generated for burn severity, terrain features and population centers.

Our red flag warning verification statistics were unchanged from the previous year with roughly double the number of warnings issued. The Flagstaff forecast office met or exceeded Western Region goals for POD, FAR and CSI.

In 2011, a second forecaster from our office volunteered to become IMET certified. Lead Forecaster Tom Clemmons is currently in the IMET training pipeline and will soon finish his certification process.

### **Fire Weather Forecast Product Summary:**

<b>Spot Forecasts:</b>	<b>574</b>	<i>(553)</i>
<b>Fire Weather Watches:</b>	<b>289</b>	<i>(153)</i>
<b>Red Flag Warnings:</b>	<b>332</b>	<i>(164)</i>

*(Totals for 2010)*

## **2. QUARTERLY WEATHER SUMMARY**

**JAN-MAR:** In January, a persistent high pressure ridge pattern produced cool and dry conditions across northern Arizona. Several storms in February brought our annual precipitation back to near normal for our western zones. March (which is typically our wettest month of the season) was dry, and officially kicked off the dry season one to two months earlier than normal. Precipitation amounts in the White Mountains region of eastern Arizona were running a full 2 inches below normal or roughly 30% of their normal year to date precipitation amount by the end of the first quarter.

**APR-JUN:** Spring is normally when the heart of our fire season begins with dry and windy weather conditions across northern Arizona. The spring of 2011 was no exception, after a few storms in April dry and windy was the rule for the weather pattern until the summer monsoon started in July. In June, the temperatures were well above normal and dry conditions with strong winds helped set the stage for the largest wild fire in Arizona state history.

**JUL-SEP:** The wet summer monsoon season started up on the first week of July and resulted in near normal rainfall amounts for the first month. August became the second warmest on record for many towns across northern Arizona with below normal rainfall amounts. September was warm and wet.

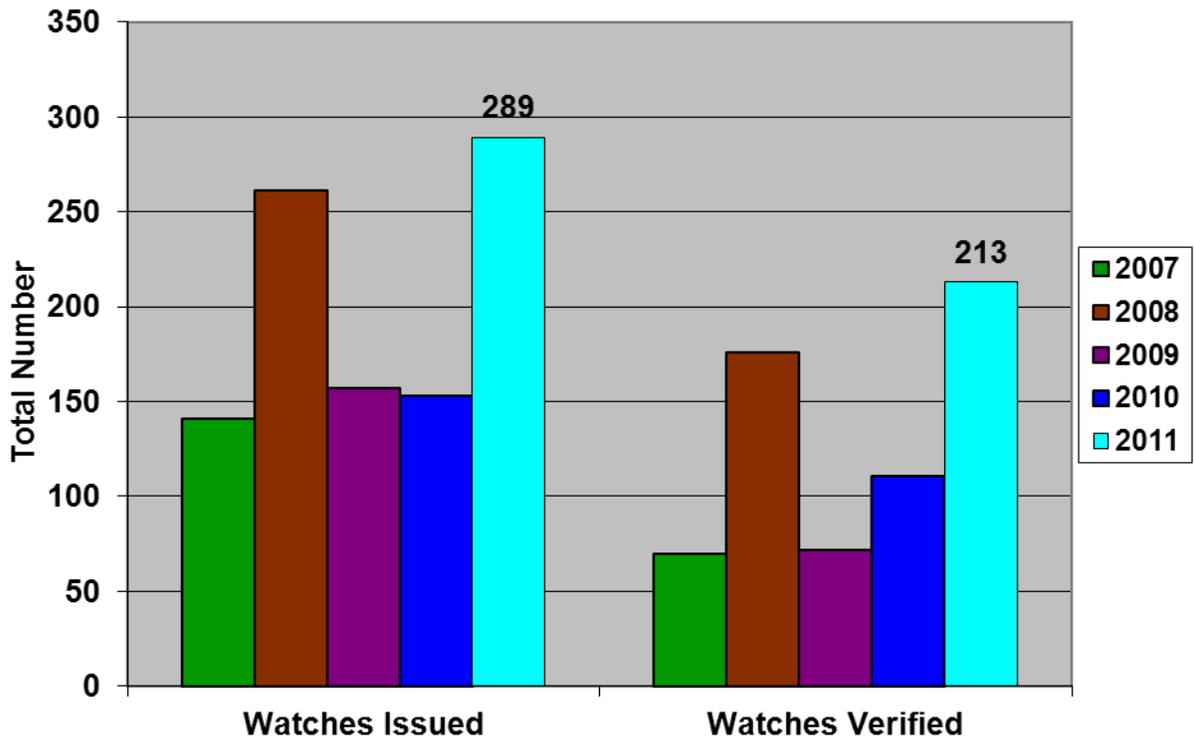
**OCT-DEC:** Summer conditions continued through much of October with warm temperatures and near normal rainfall. An early winter storm in November limited much of the fall prescribed burning activities. Several snow storms arrived in early December and produced a widespread 1 to 2 feet of new snow over much of our higher terrain forest areas.

## **3. FIRE WEATHER WATCH AND RED FLAG WARNING VERIFICATION**

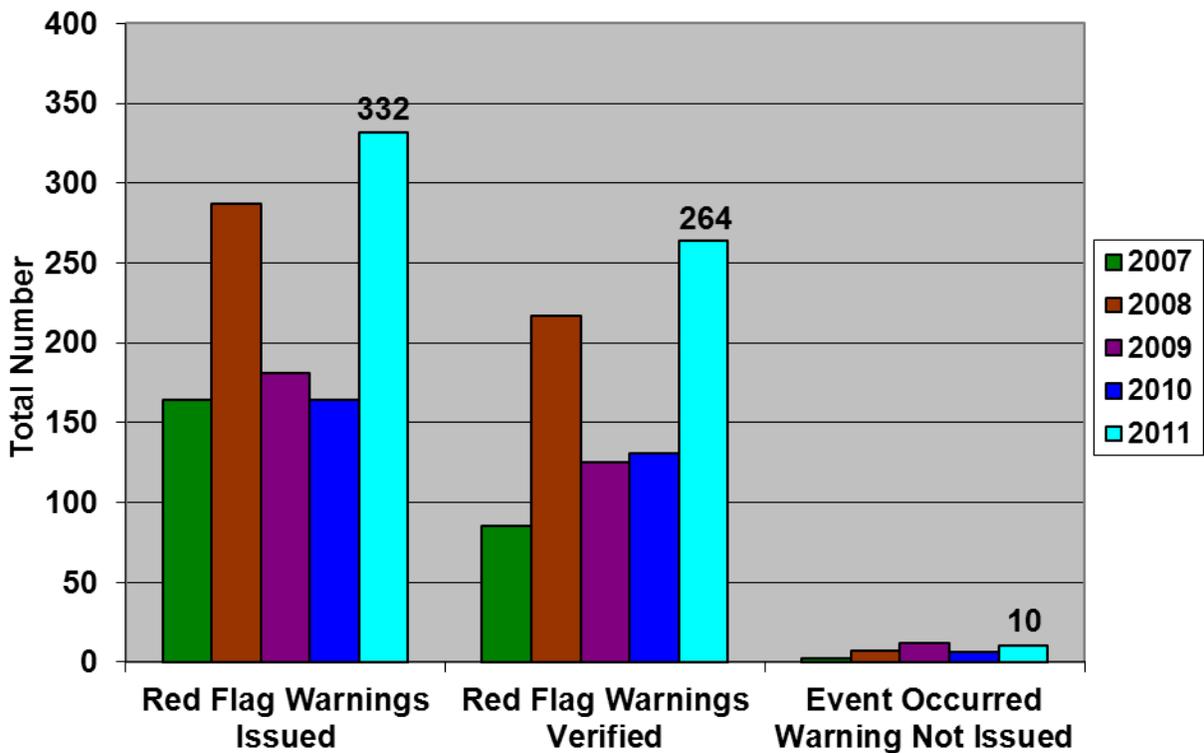
### **Watch and Warning Statistics for the 2011 Fire Season:**

In 2011, our red flag warning program recorded the highest number of warnings from March through June than any of the previous 4 years. Although the red flag warning workload was higher than normal, our forecast team met or exceeded western regional goals and our statistics for POD/FAR/CSI (see graphs below) were unchanged as compared to 2010. Other successes with the warning program include a 21 hour lead time on warnings with a higher number of fire weather watches issued in advance of our red flag warnings. Additionally, 74% of our fire weather watches were eventually verified as red flag warnings, giving our fire weather customers 24 to 36 hours advanced notice of critical fire weather conditions.

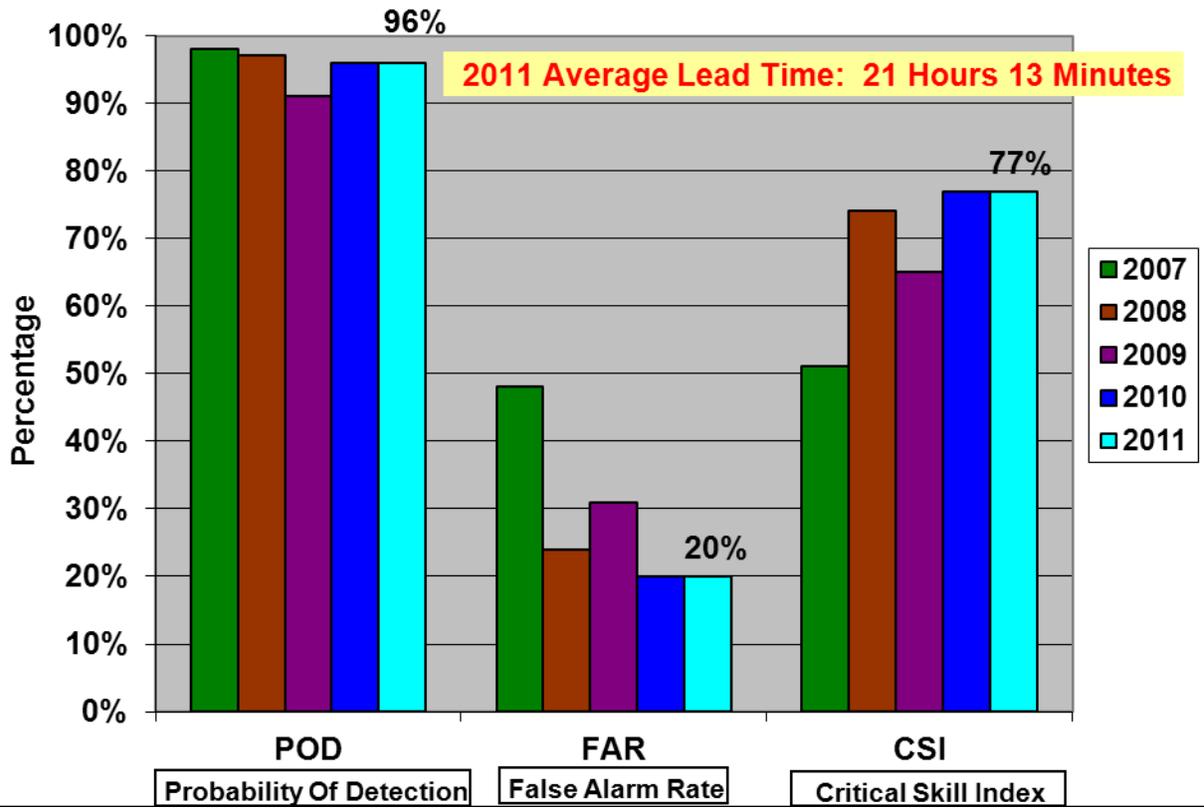
### Fire Weather Watches



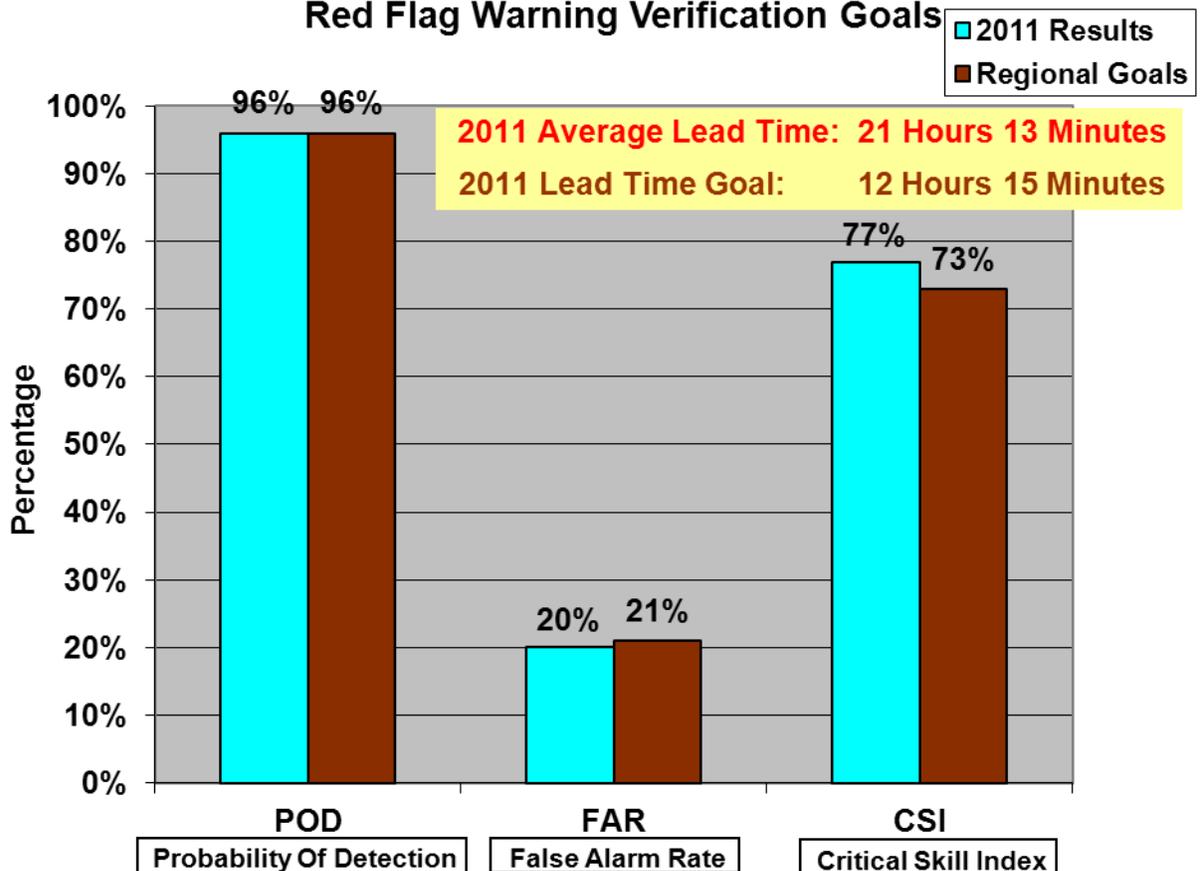
### Red Flag Warnings



### Red Flag Warning Verification



### Red Flag Warning Verification Goals



#### 4. SPOT FORECAST SUMMARY

Wildfire forecasts:	346
Prescribed Burn forecasts:	226
Search & Rescue forecasts:	2
<b>Total:</b>	<b>574</b>

#### 5. INCIDENT METEOROLOGIST DISPATCHES FOR 2011

Our IMET, **Mark Stubblefield**, provided on-site support to two fires:

**Wallow Fire Arizona (Apache-Sit NF)     June 13-28                     16 Days**

**West Texas, (Texas State Forestry)     October 26-November 9     15 Days**

Our IMET, **Tom Clemmons**, provided on-site support to one fire:

**Los Conchas Fire, NM ( Santa Fe NF)     July 3-13                     11 days**

**Number of IMET Dispatches:     3**  
**Number of IMET Dispatch days: 42**

#### 6. FIRE WEATHER TRAINING ASSIGNMENTS

<b>Date</b>	<b>Course</b>	<b>Agency</b>
2/10	Introduction to Wildland Fire (guest lecture)	Northern Arizona University
2/15-16	S-290	BIA Forestry
2/28-3/1	S-290	BLM
3/13	S-390	AZ Wildland Fire Academy
3/15-16	S-290	AZ Wildland Fire Academy
5/10	Fire Lookout Training	Coconino and Kaibab NF
5/17-18	S-290	Kaibab National Forest
9/22	Introduction to Wildland Fire (guest lecture)	Northern Arizona University

## 7. FIRE WEATHER OUTREACH MEETING SUMMARY

<b>Date</b>	<b>Meeting Type</b>	<b>Agency</b>
1/18	Verde Valley AZ Fire Chiefs	Local Fire Dept. Sedona
1/25-26	AOP Meeting	USFS Region 3
2/25	BIA Tri Regional FMO Meeting	Regional BIA
3/22	North East AZ Fire Chiefs	Local Fire Dept. White Mountains
3/25	Yavapai County	Wildfire Evacuation Exercise
4/7	FMO Meeting	Coconino National Forest
4/13	FMO Meeting	Ponderosa Fire Advisory Council
4/21	Spring Meeting	Prescott National Forest
5/11	Pre-Fire Season Media Workshop	Coconino and Kaibab NF
6/16	Locust Fire Hydro Meeting	White Mountain Apache Tribe
6/21	Wallow Fire BAER Collaboration Meeting	(multiple agencies)
7/6	Wallow Fire BAER Collaboration Meeting	(multiple agencies)