



Incident Support of the FEMA Joint Field Office Established in Response to the October 2007 Southern California Wildfire Siege



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Background

Devastating wind-fanned wildfires burned extensive portions of southern California in late October 2007. As many as **24 wildfires** burned across **7 counties** and an area encompassing over **21 million people**. Fires eventually burned **522,398 acres**. Some of these fires were in urbanized areas and all of them threatening the inhabitants in their paths. As many as **321,500** persons and their animals were evacuated.

The National Weather Service (NWS) in Oxnard was requested to support the FEMA Joint Field Office (JFO) in Pasadena, CA, established to support recovery efforts. There were numerous successes in this support, while not without its challenges.



October 24, 2007 - NASA/MODIS satellite image with fire boundaries overlaid

FEMA's Joint Field Office

- In operation in **Pasadena, CA**, since the 1994 Northridge earthquake, with approximately a dozen FEMA staff on-site at all times.
- **October 22, 2007** – Operational response to wildfire siege initiated to coordinate federal, tribal, state, and local operations throughout Southern California.
- **Over 600** staff on-site representing **well over 100 agencies**, including FEMA, DHS, DOD, DOE, USFS, EPA, USDOT, DOJ, USGS, California State EMA, California's Governor's Office, and NOAA.



Situation room of FEMA Joint Field Office in Pasadena, CA



Summary of NWS Support

Support to the JFO began on-site on 25 October. The Incident Support Specialist (ISS) – as referred to here – was assigned a workspace in the **JFO's Planning Section**. The Internet and **FX-Net** application were the primary sources for weather information.



Operations area of NWS support specialist

Dedicated on-site support was provided daily from 0700-1900 LST, and ending on 5 November, then support continued off-site through March 25, 2008.

Initial JFO focus and weather support was directed toward fire suppression, containment, and safety of the utility infrastructure. Following containment, weather support focused on post-fire threats such as cold, heavy snow, and debris flows in and below the burn areas.

While there were numerous coordination calls, meetings and countless questions from support staff, the majority of weather support provided **over the 153 days** was in the form of written weather forecasts, weather summaries, and stand-up briefings. In total there were:

- **180 Written Forecasts** – focused on the weather for the next operational period (1-14 days).
- **49 Weather Summaries** – highlighted the weather in the last operational period.
- **44 Stand-up Briefings** (on-site or via telephone when off-site) – focused on major weather impacts expected in the upcoming operational period.

Updated weather for operational period – 12/04/07 0700 – 12/05/07 0700

...Red Flag Warning in effect...

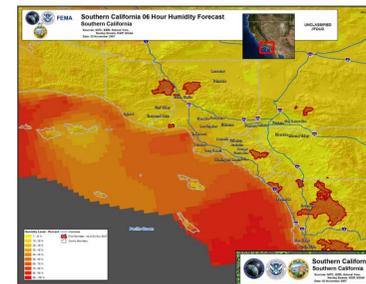
High pressure covers southern California and weak to moderate offshore flow will continue through December 5. North to northeast winds 20-30 mph with gusts as high as 55 mph will occur through favored passes and canyons. Lesser winds are expected in areas further south and east into Orange, Riverside, San Bernardino, and San Diego Counties. This offshore flow along with warmer daytime temperatures (80s) and lower humidity values (teens and single digits) has once again brought a fire weather threat to some of those areas that did not receive recent wetting rains. These places mainly include the mountains of Los Angeles, Ventura, and Santa Barbara Counties where a Red Flag Warning is now in effect through 10 am PST on December 5.

Onshore flow will return December 6 as a strong low pressure system approaches the west coast. This next system looks to be very robust with rain now expected over the northern burn areas beginning late on December 6 and southern burn areas beginning on December 7. Rain will turn to snow at higher elevations on December 8 with rain and snow showers continuing over southern and eastern burn areas through December 9. Rainfall amounts will likely exceed an inch in all areas with more favored locations in the mountains and foothills receiving at least 3 inches of rain.

Sample written forecast issued on December 4, 2007, at 0700 LST

Primary Successes

- **ISS emulation** – Exceptional value in having **on-site** incident support for weather. Kim Hazel, FEMA Office of General Counsel commented that, *"In all my years with FEMA I have never seen such weather expertise and quality given in a weather briefing at a JFO."*
- **Improved coordination** – The ISS was instrumental in communicating threats to JFO staff through direct, face-to-face communication and stand-up briefings. The ISS also was instrumental in communicating a unified message to the JFO for an area served by two forecast offices, NWS national centers, and multiple Incident Meteorologists (IMET) assigned to the fires.
- **Media Subject Expert** – The ISS was able to support the JFO Public Affairs section in addressing weather questions.
- **Government Partnering** – Sharing a common mission of commerce and the protection of life and property.
- **New Products** – The ISS assisted the JFO's Situation Unit to create GIS-based forecast graphics.



Images created in the JFO Situation Unit using the NWS National Digital Forecast Database (left: relative humidity; below: wind). Both images were used in briefings to the Pentagon.



- **Area/Data Familiarity** – The ISS was familiar with the local area and its climatology and service needs. In a fast paced environment requiring quick responses to weather forecast needs, an ISS needs to have that local familiarity to quickly and correctly respond.

Primary Challenges

- **Coordination** – The JFO was responsible for an area served by two WFOs, multiple NWS national centers, and at one time as many as 8 IMETs. This emphasized the important ISS responsibility to communicate one unified NWS message to the JFO.
- **Rumor control/Misinformation** – Information flows fast in a disaster response. The Internet is an easy source for "weather shopping." The ISS needed to recognize this and, if needed, dispel false weather information to prevent poor decision making.
- **Situational Awareness** – It was critical for the ISS to be aware of the weather situation as well as understanding response and recovery efforts. In one instance, the ISS provided information on expected drizzle, which when falling on ash-covered power lines, may cause a major power outage. The lines were cleared and the outage avoided.

Conclusion

The NWS clearly played a vital role in providing dedicated, on- and off-site weather support in response to a major disaster. There were numerous successes, but not without certain challenges.

Unlike an IMET, who is providing dedicated support for one particular incident, **the ISS responsibility is much broader**. From forecasting, to coordinating weather information from multiple agency sources to ensure a unified message, to dispelling false weather forecast information from outside sources, these decision support services were critical to the JFO accomplishing the highest quality of recovery and response for the people and interests of southern California.

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