

# Agenda Report

**TO:** CITY COUNCIL **DATE:** August 17, 2009  
**THROUGH:** PUBLIC SAFETY COMMITTEE  
**FROM:** CITY MANAGER  
**SUBJECT:** ESTABLISHMENT OF PARKING RESTRICTIONS WITHIN URBAN-  
WILDLAND INTERFACE AREAS DURING TIMES OF EXTREME FIRE  
HAZARD (RED FLAG CONDITIONS)

## **RECOMMENDATION:**

It is recommended that the City Council:

- 1) Direct the City Attorney to draft and return within 30 days with an ordinance restricting parking within the urban-wildland interface area of the City of Pasadena during times of extreme fire hazard;
- 2) Approve the recommended upgrades to the Pasadena Local Emergency Alert System (PLEAS) by appropriating \$117,380 from General Fund undesignated fund balance to the Fire Department's FY2010 General Fund operating budget; and,
- 3) Appropriate \$144,000 from General Fund undesignated fund balance to the Transportation Department's FY2010 General Fund operating budget to provide funding for required signage and enforcement activities, respectively.

## **BACKGROUND:**

The City of Pasadena is widely known for its beautiful setting and enjoyable climate; the mountain foothills and the dry climate made Pasadena a resort destination soon after the City was founded. Today, the foothills of Pasadena are among the most sought after locations for luxury housing and still contain areas of undeveloped property. The draw of the hillsides with the intermingling natural areas has created a circumstance, now known as the urban-wildland interface, where humans, their houses and the naturally flammable chaparral vegetation have become inseparable.

Much of the urban-wildland interface area within Pasadena was developed far before modern understanding of the hazards of the wildland interface was truly recognized and even before modern fire codes existed. The road and infrastructure system for much of these areas was developed in a time when houses were separated by much greater distances and cars were typically only five-and-one-half feet wide; fire engines at the time were twenty-two feet long, 6 feet wide and 7 feet tall. Today, the undeveloped properties within Pasadena's hillside areas are largely located on the sides of, or even within, brush-filled canyons; most of today's vehicles frequently exceed six-and-one-half feet in width; and fire engines are now 30 feet long, 10 feet wide and 9 feet tall. The roadways in these areas can be challenging to navigate on a day-to-day basis simply because the community has outgrown the original design.

The hillside urban-wildland interface is also affected by weather trends occurring within Southern California. Southern California has been experiencing increasingly severe fire seasons for the past several years with little forecast of abatement, as evidenced by this past year's "Santa Anita", "Sesnon", "Tea", "Sayre", and "Freeway" fires. The trend has been so significant that at least one major fire department in Southern California has declared that there is no longer a foreseeable end to "fire season"; "fire season" is year-round.

Pasadena is neither alone, nor unique, in this situation. The fire service in general applies best practices that are based on significant incidents of the past. An example of this type of significant incident is the Oakland Hills Fire in 1991; also known as the "East Bay Hills Fire" or the "Tunnel Fire". There are quite a few similarities between the area of the "East Bay Hills Fire" and the urban-wildland interface in Pasadena. Reading the U.S. Fire Administration's (USFA) Technical Report on the "East Bay Hills Fire" (USFA-TR-060) and comparing it with the urban-wildland interface areas around Pasadena, the similarities include: the same winding narrow roads; the same densely populated urban-wildland interface; and the East Bay's Diablo winds which are very similar to Pasadena's Santa Ana winds.

Of the lessons learned from the "East Bay Hills Fire", perhaps the most startling were the evacuation difficulties the responders faced due to the crowded, narrow and winding roads. Two narratives from the USFA state:

"The incident commander sent the only available companies to try to evacuate and protect the exposed apartment complex. At 1137 hours Engine 1, Truck 1, and Truck 3 tried to enter and work their way toward the rear of the complex, but they encountered backed-up traffic with more than 1,000 residents trying to escape on the private roadways. The plume of superheated gases and the shower of burning brands were beginning to ignite exposed wood surfaces on the upper levels of the buildings at the rear of the complex. Trees among the buildings also ignited, adding to the exposure problem." [page 24]; and,

“Residents who had been standing in front of their homes moments before, watching a fire that was two blocks away, were suddenly piling belongings, children, and pets into their cars. The steep narrow streets, now obscured by swirling smoke, were suddenly clogged with cars as falling power lines and flaming brands ignited spot fires, adding to the confusion. Some of the narrow roads were blocked by collisions as panic stricken residents searched for safe escape routes.”

“The body of Oakland Police Officer John Grubensky was found, along with five civilian fatalities, at a narrow point on Charing Cross Road. It appeared that the cars were jammed at this point by a collision in the narrowest part of the road, and the occupants were unable to escape the advancing flames.” [page 26]

### **Recommended Mitigation**

Faced with existing, outdated infrastructure and the extreme challenge of balancing the need of the Fire Department to provide for an effective response and safe evacuation with the desires of the citizens for unimpeded enjoyment of their property, easy solutions do not exist.

The Fire Department’s recommended mitigation for the hazards discussed above is a two-pronged approach to balance the difficult emergency response and evacuation issues that exist in Pasadena’s urban-wildland interface areas: 1) restriction of parking on days of extreme fire hazard (Red Flag conditions); and, 2) improved emergency notification within the urban-wildland interface areas.

The City of Los Angeles has pioneered the restriction of parking within urban-wildland interface areas as a method to simultaneously speed resident evacuations and emergency responder access. In fact, the Los Angeles Fire Department has credited the parking restrictions for reducing response times to brush fires, thereby mitigating significant damages to public and private property.

Similar to Los Angeles, the recommended parking restrictions would take place on days of extreme fire hazard, also known as “Red Flag” days. Red Flag days are declared by the United States National Weather Service (NWS) Los Angeles/Oxnard office when one of the following conditions exist or is expected to exist in the predictable future within the immediate area of Pasadena:

- 1) Relative Humidity 15 percent or less **with** either sustained winds of 25 mph or greater or frequent gusts of 35 mph or greater for a duration of 6 hours or more;
- 2) Relative Humidity 10 percent or less for a duration of 10 hours or more; or,
- 3) Widespread and/or significant dry lightning.

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The Fire Department receives routine notifications of Red Flag declarations from the NWS. If adopted, the Fire Chief, or designee, would declare the activation of Red Flag parking restrictions based upon the NWS declaration or based on other specific local hazard conditions, such as an active brush fire nearby despite the lack of Red Flag conditions. Based on historical data, the City of Pasadena expects to experience approximately 30-45 Red Flag days per year.

The recommended restrictions for Pasadena's residents model those of the City of Los Angeles. The recommended parking restrictions within the urban-wildland areas on declared days of extreme fire hazard, or "Red Flag" days, are as follows:

1. No parking shall be allowed on either side of the street on streets narrower than 27 feet in width (estimated at 32 miles of streets); and,
2. No parking shall be allowed on one side of the street on streets between 27 and 32 feet in width (estimated at 13 miles of streets).

The above referenced restricted streets are those that do not comply with modern fire access requirements. Modern fire access requirements mandate 20 feet clear access for fire apparatus to allow for room for two fire engines to pass on a road. The requirement for two fire engines to pass on a road is necessary to prevent one fire engine from trapping another, or preventing access to an area. Given that fires in the urban-wildland interface are generally rapidly moving and evolving, free movement of fire engines is of paramount concern. Therefore, streets narrower than 27 feet (20 feet fire access plus the usual width of a personal vehicle) would be restricted on both sides. Streets wide enough to allow for parking of a personal vehicle and 20 feet of fire access would be allowed to maintain parking on only one side. Streets wider than 32 feet would be unaffected by these restrictions. Streets subject to the parking restrictions being considered will be posted, consistent with existing Department of Transportation practices and requirements. It is estimated that 850 signs would be required. Maps indicating the affected streets are included as Attachment A.

In order to provide reasonable notice to the public, the Fire Department recommends the use of multiple notification methods when Red Flag parking restrictions are in place. First, Red Flag declarations from the NWS are generally available on their website and are generally distributed to and broadcast by local radio and television stations. The City of Los Angeles Red Flag parking restrictions are also generally broadcast by the local media; in general Red Flag parking restrictions in Pasadena are expected to mostly coincide with those of the City of Los Angeles. Second, a logo indicating restricted parking will be placed on the City's Internet home page, with additional information available on the Fire Department's page. Third, consistent with the City of Los Angeles' notification systems, the Fire Department intends to use the Pasadena Local Emergency Alert System (PLEAS), enhanced as detailed below, to provide notifications via landline telephone, email and mobile devices. Finally, strategically

placed gateway signs, installed at major entrances to areas with restricted streets, will be prominently displayed when parking restrictions are in effect.

Red Flag declarations are generally made in advance of the actual events. With the recommended enhancements to Pasadena's telephonic notification system, PLEAS should be able to provide notifications during normal waking hours and in most cases avoid late night and early morning calls. Fire Department staff believes these to be prudent enhancements for two reasons: 1) without enhancement, notifications by PLEAS for Red Flag alerts announced in the afternoon would continue into the late night and early morning hours, disrupting residents' sleep; and 2) failing to provide personalized notification of residents' choosing would lead to an unacceptable amount of complaint calls to the Fire Department, Department of Transportation, City Manager and members of the City Council.

As part of the Fire Department's attempt to provide multiple means of notice to the public of Red Flag parking restrictions, the Fire Department considers it vital that PLEAS be used to actively contact members of the public requesting such notification. In order to do so effectively, a number of enhancements to PLEAS will be necessary.

The recommended enhancements are as follows:

1. Create a web-based self registration portal for residents;
2. Increase the number of out-going phone lines from 24 to 72; and,
3. Enhance the notification methods to include email, SMS text messaging and notifications in a second language.

In addition to Red Flag parking restriction notifications, all of these enhancements would have the added benefit of improving the disaster and public safety notifications of PLEAS. The self-registration portal will allow residents to register, even if uninterested in Red Flag parking restrictions. This becomes even more critical, given the increasing use of non-traditional phone services like voice-over-internet protocol (VOIP, such as Vonage or Charter Cable) or cellular phones. The increase in phone lines should increase the throughput of notifications to an estimated 3,000-3,500 calls per hour (the current configuration supports approximately 800 calls per hour). Based on staff's estimate of likely notification volume, the existing PLEAS would require in excess of 9 hours to provide notification; the enhanced PLEAS would only require roughly 3 hours.

As an alternative to enhancing the City's on-site PLEAS notification ability, the Fire Department considered utilizing the PLEAS back-up system, which is hosted by the vendor. While the hosted system alternative has the benefit of limiting initial costs, the ongoing 25 cent per-call charges make this alternative fiscally undesirable. It is estimated that in less than two years of use for Red Flag parking restriction notifications, the cost of using the vendor's system would exceed the costs associated with

enhancing Pasadena's PLEAS; therefore this option was eliminated from further consideration.

## **Enforcement**

The restricted parking on narrow roads serves the same purpose as do fire lanes that are required in other areas of the City. Therefore, the Fire Department recommends that the restricted parking be treated in a manner equivalent to a fire lane. In order to allow residents to become comfortable with the new parking restrictions, staff recommends that enforcement of these restrictions take a phased approach, as follows:

- The first 5 Red Flag notifications or first 10 cumulative days of parking restriction, whichever is less, would receive warnings;
- The next 5 Red Flag notifications or next 10 cumulative days of parking restriction, whichever is less, would receive citations, but not be towed; and,
- Thereafter vehicles parking in violation of the proposed parking restrictions would be ticketed and towed.
  - It should be noted that any vehicle blocking access to an actual emergency can be towed immediately under existing laws, regardless of the above.

The Fire Department recommends that the initial fine for parking in violation of the proposed restrictions be the same as the fine for parking in a fire lane. Additionally, staff recommends doubling the fine for the second violation within a 12 month period, and tripling the fine for third and subsequent violations within a 12 month period.

## **Public Participation**

With the concurrence of the Public Safety Committee, staff began neighborhood meetings within the affected areas to solicit input. Fire Department staff attended Council Member District meetings in each of the three affected Council Districts. The Fire Department contacted all 21 affected Neighborhood Associations listed in the Neighborhood Connections' "Pasadena Neighborhood Groups Directory" at least three times offering to meet with them individually. The Fire Department hosted one general public meeting at the Central Library, attended several Neighborhood Association meetings and attended one Neighborhood Watch meeting. As a result of all meetings, an estimated 150-175 individuals personally received information from Fire Department staff. At the request of several people who attended meetings, the Fire Department also made the outreach presentation available for viewing over the Internet and established an email address to collect comments. As of July 17, 2009, the presentation webpage had been viewed 391 times. A total of 30 people provided comments either in person or by email. A summary of all comments received is included as Attachment B.

**FISCAL IMPACT:**

At this time, staff is unaware of any applicable grants for this purpose. Therefore, the fiscal impacts of the Red Flag parking restriction program are as follows:

**Parking Restriction Signage (one-time)**

	<b><u>1st Year</u></b>
Fabrication of Signs	\$50,000
Installation	\$30,000
Contingency	\$ 8,000
Project Management & Inspection	\$19,000

**Parking Restriction Enforcement (ongoing, partially offset by parking fines)**

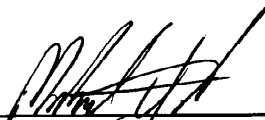
	<b><u>1st Year</u></b>	<b><u>Following Years</u></b>
New Parking Enforcement Vehicle (partial)	\$25,000	
Annual Enforcement Personnel	\$ 8,000	\$ 8,000 annually
(increase to existing contract)		
Annual Vehicle Cost	\$ 4,000	\$ 4,000 annually

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**Pasadena Local Emergency Alert System Enhancements**

	<u>1<sup>st</sup> Year</u>	<u>Following Years</u>
Computer Hardware	\$ 6,700	
Software Enhancements & Support Services	\$69,880	\$41,357 annually
Additional Telephone Lines	\$20,800	\$20,000 annually
Self Registration Web Portal	\$20,000	
<b>Total Costs (one time and annual)</b>	<b>\$261,380</b>	<b>\$73,357 annually</b>


Respectfully submitted,

  
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Attachment A – Maps of Affected Streets  
Attachment B – Summary of Public Comments and Fire Department Responses