

## Fighting a Wildfire - 10 Years After the Cedar Fire

By Chief Javier Mainar, San Diego Fire-Rescue Department

Ten years after the Cedar Fire, a great deal has changed and improved in San Diego and at the San Diego Fire-Rescue Department. However, when it comes to wildfires, a great deal has stayed the same; most importantly, we know that firestorms will happen here again. It's just a matter of when.

In the aftermath of the Cedar Fire, wood shake shingles were banned on new construction or roof replacements. Roofing material must be "A" rated, the most fire-resistant materials. New construction must have boxed eaves, or no eaves. Double glazed windows and "A" rated siding is required. All of this helps to fire harden structures.

Codes were changed to require 100 feet of defensible space between the vegetation that is the fuel of the fire and the structure. The previous regulation was 65 feet. This further reduces risk of the structure catching fire due to radiant heat exposure. One hundred feet also provides firefighters a wider area to work to more safely defend structures. Many San Diego homeowners can be commended for how well they have embraced the need for brush management and defensible space; however there is vast room for improvement. Anyone flying over the city today will see considerable proactive involvement by some residents in preparing their property for the eventuality of a wildfire.

The City has increased the number of code compliance officers we have in the field, from two at the time of the Cedar Fire, to seven officers today. They are



responsible for a comprehensive door-to-door brush inspection program of the 45,000 properties on canyon rims throughout the city. The code compliance officers also follow-up and inspect about two-thousand complaints a year, and another two-thousand vacant lots.

The Fire-Rescue Department is also a member of the [Ready, Set, Go! Program](#) Managed by the International Association of Fire Chiefs, *Ready, Set, Go!* seeks to develop and improve the dialogue between fire departments and the residents they serve. The program helps fire departments teach individuals who live in high risk wildfire areas - and the wildland-urban interface - how to best prepare themselves and their properties against fire threats.

San Diego's Community Emergency Response Teams (CERT) were formed after the Cedar Fire. Today there are 14 teams and 1500 CERT trained volunteers citywide.

There's been considerable improvement in evacuation notification since 2003, with both the City and County purchasing "reverse 9-1-1" systems. These systems were used successfully in the 2007 fires and have been improved since.

During the Cedar Fire, we recognized the benefit of having trained and qualified Incident Management Team (IMT) members assist in the organization of our efforts. As a result, more firefighters were trained to deal with the planning, logistics, safety, supplies, scheduling, financing and the "business" of fighting a wildfire. These IMT members managed the 2007 Guejito/Witch Fire autonomously within the City of San Diego. Since then, the Fire-Rescue Department has provided IMT training to many more firefighters which positions the Department well for managing future large scale wildfires and all other "all-hazard" emergency incidents

(landslides, floods, earthquakes, power outages, building collapses, for example).

Many San Diego firefighters also participate as members of the region's All-Hazards Incident Management Team (AHIMT) which is a multi-agency and multi-discipline (fire, law enforcement, lifeguards, public works, public health, emergency management, etc.) team that is deployable on short notice. The San Diego AHIMT is one of a dozen teams also recognized by the U.S Fire Administration and available to assist other jurisdictions within the State and nation, if called upon.

In 2003, two-fifths of our fire apparatus were more than twelve years old and the Department had only eight reserve apparatus ready to be deployed. Today, because of a concerted effort to make needed improvements even in the face of budget constraints, the firefighting fleet is in the best condition in more than ten years. 93 percent of the frontline engines are less than six years old, and there are 28 ready reserve engines.

Having a fleet of reserve engines is important because it allows us to send more firefighters to the fire line. Day in and day out, we operate with three shifts of firefighters, each shift working twenty-four hours. That means two-thirds of the workforce is off-duty on any given day. In a wildfire, we will call in as many additional firefighters as we have equipment for them to staff, increasing our ability to defend homes and businesses against wildfires.

To get still more firefighters and equipment into communities during a wildfire, we have thought "outside the box." In one instance we literally created a box; a portable kit of firefighting equipment that we call a Firestorm Augmented Suppression Team (FAST) kit. We recognized that sometimes, particularly after the main wildfire

has moved through an area, it is not necessary to have a full engine company and fire engine working a neighborhood. But we do still need to be there, because in a wildfire, structures can catch fire because fencing, debris or other material continues to burn and embers can get carried in the wind to previously saved structures. FAST kits of essential firefighting tools and equipment can be deployed in pickup trucks with staff that would have otherwise not had equipment to take to the incident.

Today we have 15 FAST kits ready to go.

The Department also has 8 “Air Kwik” units. It’s an air pressurized 80 gallon water tank. We add eight-tenths of a gallon of foam to each tank. When pressurized, the foam spray can be used to extinguishing small fires or mop up vegetation fires. Each unit is equipped with 100 feet of one-inch hose. Like the FAST kits, the Air Kwiks are meant to be mounted in the bed of a pickup truck.

These are innovative and creative ways to supplement the fire apparatus in the field in a major fire siege. They let us patrol a lot of neighborhoods in a short amount of time, with few resources and relatively little expense.

San Diego Fire-Rescue now owns and operates two firefighting helicopters. The helicopters have been modified and the pilots trained and qualified to drop water at night to suppress wildfires if any one of these criteria is met:

- Lives or structures are, or will be threatened
- Resources of high economic value are, or will be threatened
- Excessively high suppression costs will be prevented by taking action
- Potential for large fire growth and/or extended resource commitment

deemed unacceptable by management.

Other critical issues in aerial firefighting have been addressed since the 2003 fires. Dedicated firefighting aircraft resources across the state were stretched thin while military aircraft sat on the ground. The process to order and get approval for the military planes and helicopters to be available was lengthy and cumbersome. Agreements are now in place between the state firefighting agency Cal Fire, the California Military Department (National Guard) and the federal Department of Defense, that speed that process considerably.

However, it doesn't stop there. Even if those agreements had been in place during the Cedar Fire, the differences in communications, procedures, and protocols would have made it very difficult for the military to work in unison with city and state firefighters. Cal Fire now trains every year at Camp Pendleton with Navy and Marine pilots so that, even though firefighting is not their primary mission, the military aircraft can be a vital part of the effort against wildfires.

. During the Cedar Fire, the dispatch centers in the region saw its highest call volume ever and resources from every department in the area as well as those from outside the region provided help. Wildfire does not respect boundaries, and recognition of that fact led us to put in place a solution that is used every day. If there's an emergency in the City of San Diego and first responders from a neighboring city or jurisdiction are the closest help, we have the ability to dispatch those units. This is not just a program used during wildfires. The computer aided dispatch systems can track the position of fire apparatus and ambulances, know if they are available for a call and then dispatch the closest first responders to the aid of residents regardless of their address. Through this regional cooperative dispatch system, we can now call upon another jurisdiction's

fire department as easily and quickly as we could dispatch our own San Diego resources. It works in the other direction too; if our resources are the nearest, we go where we are needed. The majority of local fire agencies are part of this regional dispatch system now, with Escondido ready to go online in November.

Every San Diego firefighter participates in regular wildfire training to be better prepared for future fire storms. Part of this training includes learning to “triage” a situation to determine how best to use the resources available to provide maximum protection for the lives and property of citizens, as well as for the safety of firefighters.

With those changes and others, with those improvements in place, one fact remains the same: there are not enough firefighters, enough firefighting equipment, or enough water to stop a Santa Ana wind-driven wildfire.

We need only to look to Yosemite National Park this summer to realize that it is not a question of if, but when the next wildfire will strike. The vegetation conditions today are at least as dry as they were in 2003. We will always be at the mercy of the dry vegetation and weather conditions. This underscores the importance of preparation and knowing what to do when the next catastrophic wildfire occurs.