The Superscoopers and Other Wildfire Safety Sagas

I. Grounding the Superscoopers

When the Sloans received a phone call from their contractor about noon on November 2, 1993 in their office in Pacific Palisades informing them that there was a wildfire and to come home immediately, Mrs. Sloan called the office of newly elected Senator and former US Representative Barbara Boxer, requesting to get the CL-215 Superscooper planes¹ off the ground that were supposedly parked at Van Nus airport. Whether or not parked at the airport on standby, if they would have been employed, they could and would have saved homes, as it was well documented that homes were lost because Rambla Pacifico was closed by a landslide, the Las Flores bridge had burned, no firefighting services were sent to Las Flores Mesa, trapping over 30 residents, that Fire Camp 8 was largely in chaos and that most firefighters were almost too exhausted to continue fighting the fire at night because they had responded from other fires, and houses burned hours after the firefront had gone through.

But little did the Sloans know that even a US Senator would not have such "last minute" power "to get the planes off the ground," as their deployment fate was already decided in 1977 by often brutal fire politics with the help of the then-incoming Los Angeles County Fire Chief. It had come down the grapevine within the County Fire Department that he had stated (jokingly?) in a meeting that the Superscoopers would never fly in Los Angeles County as long as he was County Fire Chief. He and the union were opposed to the CL-215 and talking points related to the public could be that helicopters are more effective year-round for other projects (true), that many of the helicopter pilots are experienced WWII veterans (true), that the Superscooper was manufactured in Canada by Canadair (true), while the government was providing helicopters and fixed-wing WWII and Vietnam war surplus free and had to unload them that could be effectively used in firefighting (true). But none of these and other talking points addressed the fact that the CL-215 was much more superior in delivering water in a short time period where time is of the essence compared to helicopters and fixed-wing aircraft and that it may bite into a fire department's budget if Superscoopers are bought or leased for wildland-urban firefighting.

The Superscoopers had already been volunteered by Canadair to fight the Berkeley Fires in 1970 with Los Angeles County's request to try out the planes in Malibu scuttled after a few days, "and the aircraft returned because of contractual disputes with other fixed-wing firefighting aircraft."²

¹ Wikepedia: **Super Scooper** is a nickname given to certain amphibious firefighting aircraft built by Canadair, now Bombardier. The family of three aircraft known as "Super Scoopers" are the Canadair CL-215, the CL-215T and the Bombardier 415 turboprop.

The aircraft flies at high speed (approximately 100 mph) just above the surface of a lake or reservoir, scooping up copious amounts of water into its belly. In just 12 seconds, the plane can accumulate 1,600 gallons of water, to be subsequently dropped onto nearby fires raging out of control. This scooping ability obviates the need to return to a water "refilling station" which could possibly be very far away. A pilot must be certified to operate a seaplane, to ensure water conditions are safe for scooping (i.e., not having choppy waves).

While mostly used to fight Canadian wildfires, this aircraft is also leased to firefighting agencies in the United States for their fire season. It's also flown by several operators of countries from around the world, both in air forces such as Croatia, Greece, or Spain; government agencies like in France, Italy, or Malaysia and private operators.

² Los Angeles Times. Here's the Scoop: The Super Scooper, Los Angeles County's Newest Firefighting Weapon. 11-2 1994.

II. The Laurel Canyon (Kirkwood) Fire of September 16, 1979. West Hollywood, City of Los Angeles

In Los Angeles City the Superscoopers were first employed on an experimental basis on the September 16, 1979 Laurel Canyon Fire in West Hollywood.³ The fire burned 23 homes in a "tinder-dry hillside development characterized with homes overlooking steep slopes," accessed by narrow roads and a limited water supply.



Figure 1 – Laurel Canyon Fire (Kirkwood Fire) of September, 16, 1979

As reported by the *Herald Examiner*, the Superscooper arrived in the air at about the same time the ground firefighters arrived and did an excellent job. "And, as was shown in the next few minutes, one run of a Superscooper was all that was needed to break the back of the Mayall blaze." "As everyone in Laurel Canyon that day can testify, the Superscoopers more than proved their worth—yet within days, the press was filled with petty bureaucratic mutterings about paperwork to certify them, and worse, cries of alarm that the Canadian planes could have caused more problems than they solved." "The Canadian pilots were doing exactly as they were told from the ground. I know. I was there."³

³ Aversa, Rudy et all. *Los Angeles Herald Examiner*. Fire in Laurel Canyon 9-24-1979.

Thorp, Robert. Los Angeles Herald Examiner. From the Ashes of Laurel Canyon, Some Burning Questions 9-25.

This article was perhaps related to a pushback by the new Los Angeles County Fire Chief against the Superscoopers as reported in the *Los Angeles Times* on September 19 under the heading "*County Fire Chief Criticizes Firm for "Superscooper Marketing Techniques*"⁴ and may have been related to the fact that the Superscoopers could drop much more water in an hour than any other firefighting aircraft. In-house it was known that the Fire Chief/the Fire Department was opposed to the use of Superscoopers for firefighting—"they will not fly in L.A. County as long as I am Chief"—and it had become a media controversy.

When L.A. County foresters were called in at request of the City of Los Angeles to assist homeowners with erosion control measures, as the bare slopes of highly erosive, "granitic soils" (there was no soil to speak of) threatened homes above and below, I inspected every affected property and I immediately demonstrated and assisted homeowners with contouring their bare hillsides with largely pregerminated barley (*Hordeum vulgare*) along with other soil erosion measures. Wherever homeowners continued watering such slopes with their garden hoses as directed, these hillsides turned green within about ten days. In the interim I also walked the streets, assisting the City with placing or enforcing wood pipe and board barriers to redirect expected "mud flows" down the streets and into flood control channels instead of homes.

But I still wondered what was the continuing behind-the-scenes infighting against the Superscoopers really all about? Was not water the most important ingredient for effective firefighting in a wildland-urban interface in an attempt to save life and property? Perhaps not. Back at County Fire Dept. headquarters, the muttering was in full swing about how to further discredit the Superscoopers and prevent them from becoming part of the hopefully federally subsidized aircraft firefighting pie.

I was then suddenly requested ("through the front office") to evaluate the effects of saltwater drops of firefighting Superscooper Canadian aircrafts on the September 16, 1979 Laurel Canyon burn (Kirkwood Fire) and issue a research report that concludes that "saltwater drops are damaging to the watershed." I was offended and replied that I should be given the opportunity to first carry out field research if that is desired and permitted; otherwise it would be advisable that the Fire Department might as well write their own 'research' reports and conclusions but that I could not add my name to such reports.

With the efforts partially funded under the USFS 5-year R&D program, research was subsequently conducted with full cooperation of the Los Angeles City Fire Department (provided helicopter service to survey the burn as well as identify possible water drops from the air); Canadair (furnished photographs of water drops during the Kirkwood Fire in Laurel Canyon and literature on CL-215 water drop patterns), the County of Los Angeles Agriculture Commissioner's office (helped collect and analyze soil samples from suspected saltwater drop patterns), University of California Berkeley Soils Laboratory (comparative analysis of wildland soils of Los Angeles County).

The report completed February 20, 1980, and titled *Saltwater drops in Aerial Fire Fighting: The Laurel Canyon Burn as Case Study* indicated that no damage to either plants or soils was found that could be directly related to the saltwater drops. The increase in surface salts was related to the ash content of the burned vegetation, but the ph (soil acidity) was slightly higher in saltwater drop areas. Observed germination and delay of germination of salt-sensitive species such as seeded ryegrass was in response to the moisture availability during the germination period.

Literature research indicated that high salinity could have detrimental effects on both plants and soil but that the effects of ocean water drops on local wildland soils is minimal since the two principal ions of saltwater, Cl- and Na+, are readily leached. Cl- (chlorine ion), being an anion, is immediately leached with light irrigation; Na+ (sodium ion) is readily leached from the soil complex with additional watering (a season's rainfall will accomplish both).

Soils theoretically can sustain a minimum of 7-10 seawater drops without becoming salt-saturated; one inch of rainfall should be able to leach the free salts of 7 consecutive water drops from the surface of chaparral

⁴ Los Angeles Times. County Fire Chief Criticizes Firm for "Superscooper Marketing Techniques. 9-19-1979.

soils so that normal germination can proceed. Additional normal rainfall should be able to leach the salts out of the soil so that seedling growth and establishment can proceed. This hypothesis should be tested for the chaparral plant gene pool to establish tolerance ranges for individual species. The chlorine ion, being a negative ion, is not held by the soil complex. It is therefore more readily available to plants but can also be more readily leached than sodium (for more in-depth information please refer to the report perhaps still available in L.A. Co. Fire Dept. files).

After the Head Deputy Forester and I were forced out of the L.A. Co. Fire Department by the end of 1982, I became a strong supporter of the deployment of Superscoopers for aerial firefighting, also supporting homeowner associations in their efforts. It was also made a top priority by the National Foundation for Environmental Safety (NFES) after it was incorporated in April 1983 and after officially taking over the role of the Malibu Mountains Residents Association in the fall, following up requests for further clarification both on the air and on television. One of the talking points was Figure 2, "Maximum Gallons Dropped per Hour," prepared by Aeronautical Engineer R. L. Cavage.⁵ It compares the maximum gallons of water that can be dropped per hour by both helicopters and fixed-wing aircraft and shows that the then CL-215 Superscooper was much superior to both in this respect.



Figure 2 – Maximum gallons of water dropped per hour by fixed-wing planes, helicopters and Superscoopers

III. The Baldwin Hills Fire of July 2, 1985 in Baldwin Hills, City of Los Angeles

Members of National Foundation for Environmental Safety had provided technical Superscooper data when homeowner groups in the mountain fire district of Los Angeles led a drive to purchase the aircraft through property tax assessment of their own homes. This drive culminated in Proposition R of the 1980 Los Angeles City ballot. While Proposition R received a majority of the votes, it was not enough for passage since it was a budget measure requiring a two-third majority which was almost impossible to achieve. Canadair (the manufacturer of the airplane), having heard about the involvement of NFES in supporting public safety issues, subsequently suggested that the

⁵ R.E. Cavage, Aeronautical Engineer. Maximum Gallons Dropped Per Hour by Helicopter, Fixed Wing Aircraft and the CI-215 Superscooper. 1981.

Foundation undertake a joint ex post facto evaluation of the Baldwin Hills Fire to see whether the use of the CL-215 could have affected the outcome of the fire. The Board considered this request in light of its previous stand of already supporting the deployment of the plane and felt that such a study could provide additional valuable insight in the plane's performance during urban/wildland conflagrations.

Since Proposition R did not receive a 2/3 majority, the Superscoopers were not available on July 2, 1985, when the arson-set fire, pushed by strong afternoon updrafts, ran up the westerly facing slopes from La Brea Ave. to Don Carlos Drive in the Baldwin Hills area of the City of Los Angeles after a 2:47 PM alarm. The small, about twenty-acre brush fire became one of the worst fires in the history of Southern California with the most homes and lives lost compared to acres burned.

Sadly, the tragedy of such proportions did not have to happen if, as alleged in a subsequent lawsuit, Pepperdine University, who owned the land below where the fire started and advanced to the homes, had properly taken care of brush clearance as required by law. Pepperdine had received notices from the Los Angeles City Fire Department but instead of responding to the urgency, had instead procrastinated, requesting and receiving an extension to July 7th, "apparently to save money and have their own crews do the brush clearance instead of City crews."

Klaus Radtke, called up as independent fire expert not connected to the Superscooper evaluation, also documented the fire start and the subsequent fire tragedy.

According to records of the Los Angeles City Fire Department, the Baldwin Hills Fire started on July 2, 1985 at approximately 2:47 PM. A citizen came into Los Angeles City Fire Station 94 at this time to report "a big fire south of the station." Upon exiting quarters firemen observed "a very large black cloud looming." At 2:50 PM truck 94 proceeded up Hillcrest Drive and Engine 94 went up La Brea Blvd. At 2:54 PM Los Angeles City Battalion Chief 3 reported "we have a half mile of brush and grass" and ordered eight more engines. At 2:47 PM Los Angeles County Fire Station 58 also received a still alarm and arrived on the scene of Don Lorenzo Drive at 2:55 PM.

The weather at 3:00 PM at Los Angeles International Airport (as reported by Los Angeles City Fire Department) was characterized by temperatures of 83 degrees F, 40% relative humidity, and wind speeds of 17 knots blowing from 240 degrees northeast. An area-wide red flag alert was in force with this typical Santa Ana weather condition and a heat wave which had started Wednesday June 26 would last through Thursday, July 4.

The fire was apparently started by at least three incendiary devices thrown from a car driving along La Brea Ave. at the base of the approximately 50% steep slopes leading to the residential area at the top. All 24 homes on both sides of the street along Don Carlos Drive, exposed to the onrushing flames with little setback, were destroyed along with 3 people dying in them. Before the fire was officially controlled, at least 49 homes would be destroyed (more than 50% burned) and 17 homes damaged, many of them within the first hour of the fire. At least 31 of the 49 destroyed homes had wooden roofs. Most of the homes with non-wooden roofs were located on steep slopes without setbacks or adjacent to burning wood roof homes. The fact that homes with wooden roofs added significantly to fire spread as the fire ran out of woody vegetation is documented along Don Diego Drive (about 500 feet inland from the top of the slopes along Don Carlos and Don Jose Drives) where all seven homes destroyed had wooden roofs.

The fuel models predicted flame length of 20 feet for grass-mustard and 35 feet for chaparral broom, the dominant vegetation on the slopes. 17 miles per hour wind speed corrected to wind speed at mid-flame length was used for the models. Wind speeds of 30 miles per hour would not only have greatly increased the flame length but would have greatly doubled the already tremendous Btu output of fuel model 4, the woody chaparral fuels. When used in the urban interface context, fuel model 4 demonstrates that steep topography, highly flammable vegetation below ridgetop homes without a setback and (God forbid!) wooden roofs are a design for disaster. This had already been demonstrated as early as 1982 in then state-of-the-art publications such as *A Homeowner's Guide to Fire and Watershed Management at the Chaparral/Urban Interface* and *Living More Safely at the Chaparral-Urban Interface*.



Photo 1 - Looking from west to east across La Brea Ave. towards Don Carlos Drive (Photo by K.R.)



Photo 2 – Close-up of Photo 1, the fire area during the rebuilding phase (Don Carlos Drive along burned slopes)



Photo 3 – Looking from south to north across the fire area (right side) during rebuilding



Photo 4 – Close-up of Photo 3.

In evaluating wildland fires, different criteria such as rate of spread, heat per unit area, flame length, and fireline intensity can be used to judge fire severity. But fires can be dangerous at any level of severity and the accepted wildland fire suppression interpretations given below, based on guidelines developed by U.S. Forest Service research scientists, are not guides to personal safety. Their research has shown that most fatalities occur in light fuels on small fires or isolated sectors of large fires so that their criteria become important for personal safety for homeowners.

If the flame length is less than 4 feet, the fire line intensity will be normally less than 100 Btu/feet/second and fires can generally be attacked at the head or flanks by persons using hand tools. Hand lines should be able to hold the fire. If flame length is 4-8 feet (and fire line intensity 100-500 Btu/feet/second), fires are too intense for direct attack by persons using hand tools, and hand lines can not be relied on to hold fires; however, bulldozers, pumpers, and aircraft can be effectively used. It is time for a homeowner to get off the roof of the house or only continue protecting the outside of the house if he/she is well dressed with protective clothing and can be shielded from the heat of the fire. If flame length is 8-11 feet (the length of a single story home) wildfires may present serious control problems and torching out, crowning, and spotting may occur. Control efforts at the head of the fire are probably ineffective and the flanks must be attacked for most effective fire control. If flame length is in excess of 11 feet and fire line line line story be attacked for most effective. When flames reach in excess of thirty feet, fires are considered to be out of control using the then-present fire control technology.

These guidelines are helpful in supporting the following scenario for the Baldwin Hills Fire. Two firefronts (as documented by News Media helicopters) hit the ridge within about ten minutes of the fire start along La Brea Ave. They first started to ignite the roofs of wood shingle homes along the ridgetop. Flames in excess of thirty feet tall (fire modeling was done conservatively) were encountered. While also igniting composition roof homes situated along the ridgetop with minimal slope setback, the fire then crowned over the ridge, spotted to surrounding wooden roof homes and continued spreading from combustible to combustible wood roofs onto Don Jose Drive and beyond. Within about one hour most of the homes that would sustain serious damage were on fire.

With the firefront hitting the exposed "firecatcher" hilltop homes on top of Don Carlos Drive, blowing out windows, leapfrogging from wood shingle roof to wood shingle roof, and then quickly spreading across the street to another row of largely wood shingle roofs while continuing its now "firestorm" march into the community, even stucco homes with fire-safe roofing were destroyed when their windows largely blew while others remained untouched, spared by the shifting winds and ground and aerial firefighting efforts.

Figure 3, the Baldwin Hills Fire Map, shown below, is based on old data still on file and shows 51 burned homes. All burned wood roof homes are indicated in red. Those few homes of undetermined roof types but largely believed to have been wood roof homes are also outlined in red. Burned non-wood roof homes are indicated in orange.

The final result was that virtually every home facing the slopes on Don Carlos Drive burned, as the flames as well as firebrands were carried upwind onto a row of ridgetop homes. Homes with composition roofs (central NW) faced heavier fuels that engulfed the homes, as witnessed, and most likely blew out the picture windows facing the slopes by direct flame impingement during the longer burnout time of the brush. The row of wood roof homes (central SW) were situated largely along a draw where the fuels were lighter and mostly grassy with ignition most likely starting first on the roof.

No effective ground firefighting was and could have been done here by the time the fire department responded because of the heat intensity generated by the burning homes. Non-wood roof homes west of Don Milagro Drive and north of Don Diego Drive confined the firestorm largely to Don Carlos Drive and prevented it from reaching inland past Don Jose Drive. However, a row of tall, flammable Italian Cypresses helped carry the fire from the backyard slopes to the street where the house on 4154 Don Jose Drive burned (while also heavily damaging the only wood roof home slope-side at 4153 Don Jose Drive), also igniting uphill homes at 4160 Don Jose Drive and 4537 and 4531 Don Arturo Place.

Along the north flank of the fire along Don Ricardo Drive, backyard landscape fuels, overall, were more discontinuous than along the westerly facing Don Carlos Drive slopes. Downslope fuels were also lighter and

consisted largely of partially cleared grasses so that the fire department could perform effective fire suppression with ground crews and hose lines.



Figure 3 - Baldwin Hills Fire Map

The six marked "scrap" photos shown below still found in my files were copied in 1985 from helicopter news reels taken at the beginning of the fire before the smoke obscured the area. They indicate that the advancing flames caught the wood roofs on fire almost instantly while it took more time to ignite the composition roof homes, unless their windows were blown out or perhaps had been left open. Photo 9 depicts the results of an effective helicopter water drop that helped cut off the flames about to engulf the wood roof home at 4567 Don Felipe Drive (but was subsequently saved) and the adjacent composition roof home. Photo 10 shows that effective helicopter support also helped save the wood roof home at 4577 Don Felipe Drive.



Ph. 5 - Don Carlos Drive. Fire racing uphill (two incendiary devices).

Ph. 6 - Wood roof homes (4263-4295) are the first to ignite (roof).



Ph. 7 – Wood roof homes: roof ignition (3259, 4263, 4271, 4279).

Ph. 8 – Composition roof homes: flame entrance through windows.



Ph. 9 – Don Felipe Dr. helicopter water drop. Wood roof on fire (4571). Ph. 10 – Effective helicopter water drop on wood roof home (4577).

DESCRIPTION

The CL-215 is a twin-engine amphibious flying boat used primarily for the purpose of firefighting from the air. It has integral tanks with a water capacity of 5,346 l. (1,410 U.S. gal.)

The engines are the well-proven Pratt & Whitney R-2800 series producing 2,100 BHP each on take-off.

PERFORMANCE (in firefighting operations)

Cruise speed at 3,000 m (10,000 ft.) Firefighting circuit speed (average)	304 km/hr 164 kts 241 km/hr 130 kts	Rate of climb, SL, 19.731 kg. (43,500 lb.) max. continuous power	305 m/min (1,000 ft./min.)		
(43 500 lb.)	144 km/br 78 kts	Perry range, 450 kg. (1,000 lo.)	2965 km (1600 nm)		
(43,500 10.)	144 Kin/ III / 0 Kis	Fuel consumption (typical)	727 litres/hr. (192 U.S. gal./hr.)		
Take-off distance					
Land, 19.731 kg. (43,500 lb.)	707 m (2,320 ft.)	WEIGHTS (in firefighting operations)			
Water, 17,100 kg, (37,700 lb.)	799 m (2.620 ft.)				
and the second second		Typical operating weight empty	12,672 kg. (27,938 lb.)		
Landing distance		Max. take-off weight (land)	19,731 kg. (43,500 lb.)		
Land, 15,603 kg. (34,400 lb.)	733 m (2,405 ft.)	Max. prescooping weight	15,195 kg. (33,500 lb.)		
Water, 16,783 kg. (37,000 lb.)	835 m (2,740 ft.)	Max. afterscooping weight	19,731 kg. (43,500 lb.)		
		Max. payload	5,443 kg. (12,000 lb.)		
Scooping distance (including safe		Max. fuel load	4.246 kg. (9.360 lb.)		
clearance height)	1,200 m (3,940 ft.)	Design limit load factor	+ 3.25 g. — 1.0 g.		



Water Dropped Per Hour									
Water to fire distance	Statute Miles			Kilometres					
	5	10	15	5	15	30			
Drops per hour	10	6	4	13	6	3.5			
Litres per hour	53,500	32,000	21,400	69,500	32,000	18,700			
U.S. gallons per hour	14.100	8,500	5,600	18,300	8,500	4.900			

Figure 4 - Cl-215 Superscooper Performance Envelope

It was publicly stated that the fire spread so quickly that firefighters could not respond fast enough to avert a fire conflagration and was so intense along the Don Carlos fire front that it could not be confronted head-on. Three residents that were caught at the head of the fire therefore died in their homes, while others escaped with various degrees of burns. Ground firefighting crews, consisting of homeowners, residents, and firemen, also were hampered

in their efforts to save homes by the lack of adequate water pressure. Some residents, who attempted to rush home to save their property, were prevented to do so by road blocks set up by law enforcement agencies. However, reviews of video tapes of the fire and conversations with residents nevertheless indicated that the fire disaster may not have been as instantaneous as initially believed as many fought the inland spreading fire with garden hoses.

Only extremely quick aerial response and continued bombing of the fire with large quantities of water could have saved the wood shingle homes on Don Carlos Drive overlooking La Brea Ave. These were the first to catch on fire and burn from the roof on down (some of them could have also had their windows blown out by the uphill racing firefront as the roofs ignited and thereby added to the speed of the fire, but this was not documented). However, it is believed that if even only 1 or 2 CL-215 airplanes would have made timely water drops as modeled (or preferably 5 minutes earlier), such continuous water drops with large quantities of water could have served as a heat sink and extinguished roof fires (even wooden roof fires) and could have greatly reduced fire spread to adjacent homes (even homes along Don Carlos Drive).

Since time was of the essence, Superscoopers would have had to respond quickly with lots of water. Based on the turn-around time of 8 minutes provided us by Canadair for this location, the following is a reasonable scenario: With the fire starting at 14:43 and requests for the planes received nine minutes later at 14:52, the first plane could have been airborne by 15:00 and could have delivered the first 1,400 gallon water drop at 15:07, about the time wooden roof homes along Don Carlos Drive had ignited/were engulfed. One drop can cover 40' x 465' if both doors are opened simultaneously. The second water drop for the first plane could have been delivered at 15:15 and consecutively every eight minutes thereafter. A second plane could have been airborne at 15:02, two minutes after the first plane, and could have delivered its first load at 15:09, initially all along Don Carlos Drive, its second load at 15:17 and consecutively thereafter every eight minutes. With this modeling scenario it was estimated that at least one-third of the homes could have been prevented from burning. Since, as previously mentioned, time is of the essence, it was estimated that perhaps half (or more) of the homes could have been saved if the calls for the planes would have been received five minutes earlier and the first water drop made at 15:01, about the time most of the ground firefighting forces arrived. How about lives saved and burn injuries reduced?

As demonstrated, the CL-215 is an effective aerial firefighting tool for protecting lives and property. While public education and fire preparedness through fuel modification and effective building and zoning code ordinances is still the most cost-effective way to reduce the damage of wildfires, fire suppression agencies need to realize their responsibility as public servants and must incorporate new firefighting technology such as the Superscoopers more quickly into their operations despite initial high costs and occasional painful overhauls of their well established and seemingly sacred budget priorities.

But let us now return to the Baldwin Hills "incident" and do some on-the-ground very effective fire prevention preplanning that could have prevented this "Design-for-disaster," reduced fire losses by at least 1/3 (!), and most importantly, prevented loss of life.

We know that time is of the essence in reducing the loss of life and property. Finally acknowledging that ridgetop homes are most vulnerable to flame impingement and that the window is most vulnerable for fire entry, either being blown out in this case by the uphill fire winds or subsequently by flame impingement itself, each window facing the slope is protected by fire shutters and each side window facing a wood shingle home is also so protected. As time is of the essence, this would not only have protected and saved the slope-side composition roof homes and would have allowed them to be at least temporary "Shelters in Place," but would have also greatly slowed the advance of the fire itself. With these ridgetop homes not "blowing up" and the firebrands only carried from some of the wood roof homes along the southern flank of the fire at Don Carlos Drive, there would not have been a fire disaster. People would also have not been injured in the streets, trying to escape the convection and radiating heat sources as these would not have been developed so quickly and to that extent. Responding helicopters as well as ground crews would have been also much more effective in containing the developing forefront along the ridgetop homes along Don Carlos Drive.

In summary, we cannot just depend on Superscoopers, helicopters, and timely ground crews to save our neighborhood through "heroic intervention" or we are just continuing playing the game of Russian roulette in the 21st Century. Common sense by everyone involved, preplanning, getting the "boots on the ground" ahead of time, and teaching homeowners how to live more fire safe is still the key to preventing the build-up of design-for-disaster situations.

IV. The November 2, 1993 Old Topanga Fire

After the November 2, 1993 Old Topanga Fire, Klaus Radtke was again called upon, this time by Fair Plan, to investigate the home fire losses in relation to the Rambla Pacifico slide closure. While there was no question that the closure endangered life and property and resulted in the loss of a fair number of homes, a potential lawsuit by Fair Plan against the County of Los Angeles was dropped when County officials contacted the California legislature and Fair Plan is told not to proceed with the lawsuit or repercussions will result relating to their ability to raise rates in the future. Lawsuit is halted.

Insurance carriers, realizing that fire losses are also related to the lack of serious commitments by local governing agencies to provide fire-safe environments (lack of proper ingress-egress, not siting of homes in less high risk topography, lack of adequate laws or codes on home design and exterior building materials, lack of proper land use and planning, etc.), extend clearance limits much beyond what local Fire Departments required at that time in order to reduce their risk. Fire Departments follow suit.

(Fair Plan representatives [perhaps again] are further made aware that water for effective firefighting is rarely if ever available in mountainous areas as the fire moves through an area, that a water hydrant in front of a house or a house in close proximity to a fire station bears little relationship to homes saved in wildland fires, that the key to saving homes is not only clearance of flammable fuels but their location and construction and that there are additional tools available such as changing wood shingle roofs, protecting windows, and the Superscoopers to help reduce expected fire losses).

As reported in the *Los Angeles Times* on November 2, 1994,⁶ the County Board of Supervisors (with the apparent strong support and foresight of the then-Los Angeles County Fire Chief whose department had identified up to 15 local bodies of water from which the plane can scoop, including the ocean), voted in September 1994 to fund leasing of one CL-215 for up to three months beginning in October. At the same time Canadair provided two planes for testing and evaluation with the California insurance industry contributing to funding. The same year Gov. Wilson signed into law enabling the state to lease two SuperScoopers for the 1995 and 1996 fire seasons. Remember, that at the same time the then-County Fire Chief reversed the policy about mandatory evacuation. Things were looking up.

V. The November 8, 2018 Woolsey Fire (City of Malibu)

Flash forward to 2018 – Reasonable expectations in Malibu seem to be high that the City is well prepared by their public officials for the next wildfire. To some, so many homes were lost in the November 2, 1993 Old Topanga Fire because the County bureaucracy and the Los Angeles County Fire Department had not prepared the community while the City had prepared for its independence just the year before, "escaping the clutches of the County." The City's new mayor is also a 20-year veteran with the Los Angeles County Fire Department, being also the Captain of not very busy ("sleepy") Fire Station 72 in Decker Canyon in Malibu, thus "having an in with Fire Department." As

⁶Los Angeles Times. Here's the Scoop: The Super Scooper, Los Angeles County's Newest Firefighting Weapon. 11-2-1994.

A body of water for scooping must be at least 4,000 feet long, 300 feet wide and six feet deep. It can scoop in headwinds to 45 m.p.h. and waves to five feet. Pilots change technique in high-waves.

^{*} Length 65 feet; wingspan 94 feet; height 29 feet. * Weight: 43,850 pounds. *Fuel capacity: 1,530 gal.

^{*} Water storage capacity: Two tanks hold 1,410 gal. *Foam storage capacity: Two tanks hold 159 gal.

^{*} Airspeed when scooping: 100 m.p.h.

^{*} Capability: Scoops 1,400 gallons of water in 10 to 12 seconds. Plane can fly four hours before refueling.

^{*} Crew: Two Canadian pilots and one from L.A. County Fire Department

^{*} Cost: Leasing over three months for \$719,000 for two crews and mechanics, plus \$515 an hour in flight. Purchase price for one plane is

^{\$16.5} million. * Pontoons give plane stability. * Excess water drains out of baffle.

reported in the *Los Angeles Times* on September 5, 2018 as follows, the now much-heralded and updated CL-415 Superscoopers have arrived in Los Angeles County.⁷

"Two massive "Super Scooper" firefighting aircraft have arrived in Los Angeles County Wednesday on loan from Quebec, Canada. The partnership between L.A. County and Canada is now in its 25th year.

The two Bombardier CL-415 airplanes are on loan, along with a large, specialized Erickson Air-Crane helicopter, also known as a "Helitank."

L.A. County Supervisor Kathryn Barger said during a press conference in Van Nuys that the aircraft are a major help to Southland firefighters. They join the L.A. County Fire Department's existing fleet of firefighting helicopters. "This impressive aerial firefighter will bring the extra muscle we need to fight fires," she said.

The Super Scoopers are "the only aircraft made exclusively to fight forest fires," said Quebec Delegate Elizabeth McKay. They're capable of dropping 1,600 gallons of water in a single maneuver, she said. They can fly through strong winds to reach areas other aircraft could not, McKay added. "In doing so, they provide critical and necessary aid to firefighters on the ground," she said.

While officials hope the Super Scoopers won't be needed, now is a precarious time for firefighters in Southern California. Santa Ana winds can quickly whip small fires into big ones, Barger said.

"Wildfires have decimated parts of California this year, and fire season is just beginning," she said. "But frankly, with high temperatures and gusty winds, the fire season isn't restricted to a few months anymore."

California is threatened by wildfires year-round, officials said.

Recent history shows the potential for massive fires, L.A. County Fire Department Chief Daryl Osby said.

"Last year we had the largest fire in the history of California, the Thomas fire, exceeded this year by a fire in Mendocino County that burned over 450,000 acres," the chief said.

Following another hot, dry summer, and five years of drought, Osby said firefighters are being positioned in strategic points throughout the county to help extinguish fires before they become large.

In addition to simply lending equipment, McKay said the partnership between L.A. County and Quebec allows firefighters in both countries to learn from one another.

"It's an example of how Canada and the United States, as neighbors, work together and lean on one another in times of crises," she said.

The local fire services were in charge of the Woolsey Fire the first day before Calfire and the Forest Service took over the next day.

But even reasonable expectations can kill, as some unfortunate pedestrians have found out when crossing sidewalks without looking right and left. So, reasonable expectations were again high when the November 8, 2018 Woolsey Fire at first slowly breathed down on Malibu along a predicted fire path. However, nobody expected that by the next day almost double the homes compared to the 1993 Old Topanga Fire would burn down and this time would also invade Point Dume, as could be expected. Point Dume was almost the only spot in the populated coastal strand of the Santa Monica Mountains that had been overrun by only one large wildfire (fire over 100 acres) since fires were recorded by the then-County Forestry Department in 1919, the last being the 1935 Latigo-Sherwood Fire.

So, what happened? Where were the City's public officials and where was the mayor? Where were the homeowner firefighters? Where were the ground firefighting crews? Where were the Superscoopers that could have contained the Woolsey Fire where it started?

1. Where were the City's public officials and where was the mayor?

As reported by the *Malibu Surfside News*⁸ evaluating the report by Independent Partners, the management company hired by the Malibu City Council to evaluate the City's response to the November 2018 Woolsey Fire Disaster, the major findings (in addition to over 50 recommendations) were the following:

- A. <u>Malibu residents had an unrealistic expectation about emergency response.</u> Really?
- B. <u>City employees lacked the training, experience and leadership to handle a disaster of the magnitude of the Woolsey Fire.</u>

(How can this be? What about the Malibu City mayor, a County of Los Angeles fire captain with over 20 years fire experience with L.A. County Fire Department, having been assigned to three of the four fire stations within

⁷ Myers, Ervin and Brian Day. Los Angeles Times. Super Scoopers Arrive in Los Angeles County for Use in SoCal. Sept. 5, 2018.

⁸ Guldimann, Suzanne. *Malibu Surfside News*. Independent report on City's Woolsey response offers 53 recommendations. August 8, 2019.

the City of Malibu and living in Malibu since 1990, becoming a City Council member in 2016 and drawing a salary of about \$97,000 as mayor in addition to his Fire Department salary? As mayor, should he not have been part of the Strategic Fire Protection Planning effort for the City along with the County Fire Department that had contracted the fire protection services for the City of Malibu of which he was mayor?).

The Los Angeles Times⁹ reported in a bombshell Sunday headline article on Oct. 21, 2018, titled <u>L.A. County</u> firefighters earn massive overtime pay, busting budgets and raising questions that "Overtime costs at the Los Angeles County Fire Department had surged 36% in the last five years, placing some firefighters among the highest-compensated workers in local government. The increase comes as the department grapples with staffing shortages and several seasons of extreme wildfires. Yet some county officials and outside experts question whether fire commanders are properly managing their \$1-billion payroll. This article says millions of dollars spent on unplanned overtime could otherwise have been used for mental health, housing or probation officers. The Fire Department is funded primarily through a special property tax whose revenues cannot be used for other county departments.



Photo 11 - Firefighters' overtime pay skyrockets.

The article then further disclosed that Malibu's mayor and at the same time the Sta. 72 fire captain earned the second highest Captain overtime pay, stating "One such firefighter is Capt. Rick Mullen, who leads a team at Station 72, a remote outpost at the western tip of the county, in the canyons north of Malibu. He earned \$404,000 last year thanks to more than \$260,000 in overtime. Mullen, a retired U.S. Marine Corps colonel who is also the mayor of Malibu, was paid for working 6,599 hours last year — the equivalent of working five 24-hour shifts a week for the entire year, according to payroll information released by the department under the California Public Records Act. He said he took extra shifts in many cases voluntarily, in part to avoid being recalled to duty on days when the City Council meets...Mullen, who supervises a team of three, said fatigue is a valid concern. But his station isn't generally disturbed by emergency medical calls at night, allowing sleep — time for which he and other firefighters get paid — but still requiring many hours away from home."

Mullen served as mayor from February 2018 until December 2018.

⁹ Stiles, Matt. *Los Angeles Times*. L.A. County firefighters earn massive overtime pay, busting budgets and raising questions. Oct. 21, 2018.



Figure 5 – Woolsey Fire

So, how prepared was Malibu really for this wildfire? In the 1970s we had already designed a triage system with "out-of-the-box" thinking brush fire captains, driving through the mountains and predicting what homes would burn next. We hoped to then focus on educating affected homeowners. However, it became quite political and went "underground." Malibu's incoming mayor was apparently also a victim of a lack of preparation on everybody's part. It was reported that Jefferson "Zuma Jay" Wagner, who served as Mayor Pro Tem of Malibu during the Woolsey Fire, was taken to the intensive care unit after experiencing severe smoke inhalation while trying to save his home as the Woolsey Fire approached on Friday, officials announced. Despite his efforts, the home burned down, <u>ABC 7</u> reported "...Wagner is popular locally and is known for operating Zuma Jay Surfboards off of the Pacific Coast Highway in Malibu. Wagner was selected as the Mayor Pro Tem, meaning that by tradition he was the next mayor in December 2019, following Mullen's nine-month term. The Mayor Pro Tem is a position designated to a councilperson who will serve in the mayor's absence due to death, impeachment or resignation. According to the *Hollywood Reporter*, Wagner had also dabbled in the entertainment industry, having played a former Marlboro Man and participated in films such as *Into the Wild*, *Flags of Our Fathers*, *Inferno*, and *L.A. Heat*."

C. There were serious gaps in communication between the City, residents, and emergency responders.

"Communication was further complicated by the relocation of the City's Emergency Operations Center from Malibu City Hall to Santa Monica (perhaps read 'escaped or ran away from responsibilities, leaving the residents to fend on their own,' K.R.). Critical important items left behind included most communication gear such as laptops, cell phones, satellite phones, etc.

2. Where were the homeowner firefighters?

Mass evacuation had been ordered and the streets were so tightly blocked off by the police—almost turning the area during the fire into a "police state" as some stated—that not only homeowner but even knowledgeable and "certified" professional firefighters could not get back in to save homes. This is very disconcerting and reminds us again of the strong power of the firefighters unions "protecting their turf." Carroll Wills, the communications director for California Professional Firefighters, a labor union representing rank and file firefighters in California, stated that from the standpoint of first responders, private certified professional firefighters are not viewed as assets to be deployed.¹⁰ They are viewed as a responsibility. Scott McClean, public information officer for CALFIRE on the Woolsey Fire, when asked why professionally trained personnel such as for the USAA Wildfire Response Program, were not allowed in with the subsequent result of the burning of affected homes, he also clearly stated that it is CALFIRE's

¹⁰ Tallal, Jimy. *Malibu Times*. CALFIRE denies access to private firefighting crews sent by insurance companies. 12-27-2018.

policy to not allow them in when there is an evacuation order for the area the house is in. But consider that the CALFIRE is responsible for the often blanket evacuation orders. He further explained that CALFIRE considers private firefighters to be civilian regardless of the firefighting experience and training they may have. They are also not part of the official fire service chain of command (apparently very important in an up-down paramilitary environment, K.R.) So, are the homes of older persons the first to burn as they are not physically able to defend their home anymore and are the first to evacuate?

3. <u>Where were the professional ground firefighting crews</u>?

The Woolsey Fire, as analyzed by the *Los Angeles Times*,¹¹ apparently did not receive the required resources in its initial stages to control/contain/direct it. The report states:

"The Los Angeles Fire Department, the city's fire agency, also sent engines toward the Woolsey fire, but its firefighters seemed to grow frustrated with the lack of a plan and resources on the scene, according to radio transmissions. Some firefighters said in radio transmissions they were hampered by a lack of water at the Boeing facility and by poor cellphone service, which forced them to move the command center to a Ventura County fire station.

By 5 p.m., the L.A. city fire department had completed a map modeling how the Woolsey fire would burn, showing with a high degree of accuracy its ultimate path through Bell Canyon, the Santa Monica Mountains and Oak Park. Even as the Woolsey fire worsened through that first afternoon and evening, firefighters struggled to get more boots on the ground. By 7:30 p.m., the Hill fire was being battled by 400 personnel while only 150 firefighters from three agencies were on the Woolsey fire, according to incident updates released by fire officials.

Over the next three days, the Woolsey fire made a devastating march to the Pacific Ocean, destroying more than 1,500 structures from Oak Park to Malibu, burning almost 97,000 acres and killing three people. The Hill fire, by contrast, destroyed just four structures and burned 4,500 acres..."

When the fire finally moved through West Malibu on its way to the ocean, ground firefighting crews were largely absent. Elderly homeowners watched in disbelief from Pacific Coast Highway as their homes went up in flames without firefighting forces in sight. As documented, firefighting crews and equipment were massed (in chaos?) at the Ventura County Fire Dispatch H.Q. while certified private firefighters and homeowners, knowing the area and being knowledgeable about the road system and water sources, were prevented from reaching endangered homes.

4. What about the CL-415 Bombadier Superscoopers?

When reviewing the January 6, 2019 *Los Angeles Times* newspaper article by Cosgrove as further outlined below, it still remains a mystery why the two Superscoopers (or at least one) were not dispatched as soon as the fire started. Weather conditions allowed the planes to fly and they were the proper aerial firefighting force to quickly respond and perform effectively in such hilly terrain. If the CL-415 Superscoopers were really stationed at Van Nuys airport as they were supposed to be, they could have responded to the fire start within approximately 10 minutes of the initial call. Apparently the Los Angeles County Fire Department was in charge of dispatching the Cl-415s but sent a helicopter instead as first aerial response.

The Woolsey fire started at 2:24 p.m. on November 8, 2018 on the site of the old Santa Susana test lab near Simi Valley, with a column of smoke visible on what was a clear day across eastern Ventura County.

"Do you have eyes on where that smoke's coming from?" a Ventura County firefighter asked another firefighter on his way. It would take **almost 20 minutes for the first unit to arrive**, a Ventura County engine carrying three firefighters, driving from their Simi Valley station about eight miles away, according to incident logs and interviews. When **a helicopter from the Los Angeles County Fire Department arrived about 2:50 p.m.**, a crew member estimated the Woolsey fire to be about five acres with a rapid rate of spread and structures threatened. Over the dispatch, the crew member reported a **southeast wind of about 25 to 30 miles per hour**.

The area where the fire started, at the Santa Susana Field Laboratory, is located near the Los Angeles and Ventura County line in a **"mutual threat zone,"** an area that the Los Angeles County Fire Department, Ventura County Fire

¹¹ Cosgrove, Jaclyn. *Los Angeles Times*. Firefighters' fateful choices: How the Woolsey fire became an unstoppable monster 1-6-2019

Department and Los Angeles Fire Department have agreed, through a memorandum of understanding, to defend together because of the threat a fire there poses to each agency's communities. Each year, firefighters from the three departments train together in the Santa Susana area to prepare for a fire. Their most recent training was in June. Soon, there would be two fires in a county that had already experienced incredible tragedy just 15 hours earlier — the shooting at the Borderline Bar and Grill in Thousand Oaks, where 12 people were shot and killed.



Photo 12 – Cl-415 Superscooper picking up water, mopping up on the fire after all homes were lost. (11-11-2018).

Ventura County officials say the Hill fire took priority over the Woolsey fire because it was an immediate threat to lives and homes. The Hill fire grew to 100 acres in the first 15 minutes. It jumped the 101 even sooner, in 12 minutes, and when the California Highway Patrol shut down the freeway, several drivers were trapped when they tried to go around the roadblock and drove directly into the blaze. Cal State Channel Islands was evacuated. Calls poured into the Ventura County dispatch center from residents who were older or with disabilities asking for help in evacuating. Sheriff's deputies got boxed in while trying to evacuate people and, at least once, needed helicopters to make water drops....

Both fires were driven by the same powerful Santa Ana winds.

But at least at the beginning, the two fires behaved differently. Gardner said the origin of **the Woolsey fire was in an** area with topography that shielded it from some of the most powerful wind gusts, which were blowing at 37 mph when the blaze first began.

This made it spread slower than the Hill fire — *at least at first, Gardner said. The Woolsey fire grew to 750 acres within its first two hours, compared to the Hill fire, which officials initially said scorched 8,000 to 10,000 acres in its first 30 minutes.*

Certain details of the first hour or so of the Woolsey fire remain a mystery. The fire began near a Southern California Edison substation that experienced issues shortly before the Woolsey fire started, and the utility has said it's investigating whether its equipment sparked the blaze.....

However, once nightfall hit, their aircraft had limited effectiveness because of the high winds gusting over the region.

"Air attack resources were severely hampered by wind on the Woolsey fire," Imbrenda, a public information officer with L.A. County Fire, said in an email. "Once we have sustained winds of 40 mph, air drops become ineffective. Firehawk helicopters flew in support of ground operations throughout the night on Nov. 8. All other air resources were grounded due to high winds."

One of the additional challenges that the Woolsey incident commander faced was getting air tankers.

Whereas helicopters are primarily used for direct attack, dropping water on active fire, air tankers are often used to drop pink retardant along ridges and mountainsides to create or improve control lines around the fire.

On Nov. 8, air tankers — which don't fly at night — were in high demand, Gardner said. The deadly Camp fire had

started in Northern California the same day at 6:33 a.m., and officials from all three fires were calling state emergency leaders asking them to send help.....

But the Woolsey fire began spreading at a much faster pace — with far fewer firefighters on the ground than were battling the Hill fire.

With the Ventura County Fire Department consumed by the Hill fire, it was going to be up to neighboring agencies to help battle the Woolsey fire.

And the location of the Woolsey fire seemed to make mutual aid achievable, with it burning along the Los Angeles County line not far from both L.A. city and county fire stations.

The agency to send the most fire engines in the first hours of the Woolsey fire was LAFD.

Richmond, the LAFD's Valley bureau commander, said in an interview that he, along with other fire leaders working the Woolsey fire, discussed early on that they knew this fire would get serious quickly.

"At the end of the day, the concern, from my perspective on this incident, is obviously [we're] looking out for L.A. city and making sure that our assets and risks are protected, and if that means dropping water on a Ventura County fire, and it will help us down the road, that's what we're going to do," Richmond said.

Firefighters from LAFD (L. A. City Fire Department) started streaming in less than a half-hour after the fire began. Radio transmissions show, soon after they arrived, the firefighters started placing hoses around the fire, giving them quick access to water, and assessing the size and direction of the fire. Within an hour, 11 fire engines and two fire trucks had arrived.

Shortly after they arrived, an LAFD firefighter with Engine 481 asked Engine 28 to drive over and help them establish a fire line. But Engine 28 responded that the winds were shifting and they needed to stay put.

"There's no more resources where we're at," an Engine 28 firefighter said.

"Roger that," the firefighter on Engine 481 responded. "We'll figure something else out."

Repeatedly over the next hour, the crew's battalion chief remarked that the fire's leaders were still establishing a plan and noted, "We're having issues with communications right now." The firefighters discussed how, because of a limited number of hydrants at the Boeing facility, they had to use trucks to keep shuttling water to each other to continue battling the blaze.

L.A. County had about seven engines staging near the Boeing gate when the county's first strike team arrived about 3:30 p.m. and radioed in seeking orders.

"We're still coming up with a game plan," a fire leader responded.

Gardner, the Ventura County assistant chief, said the plan referenced was fire leaders developing their control objectives and other advanced strategic decisions, but that this wouldn't have kept firefighters on the ground from actively fighting the fire.

The LAFD continued to send more ground troops than L.A. County into the zone over the next few hours, according to state mutual aid data and incident logs.

Meanwhile, the county fire department was amassing an army of engines at Fire Station 89 in Agoura Hills. By 4:33 p.m., four strike teams were in place there.

Imbrenda said the strike teams were used to assess neighborhoods in L.A. County that county fire leaders believed would eventually be in the path of the Woolsey fire. Those assessments were used to create a firefighting strategy for the area, he said.

L.A. County's incident log, dispatch recordings, and the state mutual aid data reviewed by the Times show those four strike teams did not arrive at the Woolsey fire line until just after 9 p.m. By then, the fire was approaching Oak Park which is about three miles north of Fire Station 89.

At 8:54 p.m., Ventura County Fire Capt. Jeff Pike, the Woolsey incident commander, told Ventura County Division Chief John McNeil over the radio that fire activity was picking up, and that he expected the blaze to reach Oak Park in about an hour. He said he wanted five strike teams to defend Oak Park, according to radio transmissions.

"It's my understanding we might have some L.A. County resources, staged at (Fire Station) 89," Pike said. "If we could use those resources with the understanding that if L.A. County gets impacted, we can bump those resources back into the L.A. County area."

About eight minutes later, at about 9:02 p.m., an L.A. County firefighter radioed to dispatchers that the four strike teams from Station 89 were responding to the blaze.

The county fire department disputes this chronology, insisting the strike teams arrived hours earlier than the records indicate, and that the arrival time that's reflected in the records was a data entry error.

But officials would not provide any further documentation of the teams' exact arrival times.

Imbrenda cautioned the Times that the radio transmissions it reviewed might not include all tactical communications and that the broadcast could include erroneous reports from civilians.

Station 89 sits along the 101 Freeway. Radio transmissions indicate that just an hour after the Woolsey fire started, one of the L.A. County battalion chiefs overseeing the agency's Woolsey response wanted to place firefighters on the 101 to prevent the fire from jumping the freeway.

His concern was understandable — *history has shown that, once a fire crosses the freeway, it can easily make a run for the beach communities.*

Los Angeles County Fire Chief Daryl L. Osby defended his department's tactics, though he stressed he could not speak to specific actions, including when the strike teams arrived and how they were used.

The rest is again history. What else is new? Will we ever find out all the facts and will we ever learn and not forget the next time around? Well, this is a loaded question but let us just analyze a few things. During the 1950s and even into the 1960s the Agoura and Calabasas Hills along what is now Highway 101 were dotted with sheep so that the explosive, grassy fuel was kept to a minimum. This may have also been the case with much of the Hill Fire area. However, the lack of subsequent grazing left an explosive fuel loading in place when the Hill Fire erupted and made a run through it as the Woolsey Fire started.

5. What happened to Point Dume?

Not only previous fires define the final outcome of fires along the coastal stretch but also the time of day, the weather inclusive of fire winds interacting with local onshore winds, and firebrands. Since, for example, some of the Santa Ana wind-driven fires start in the late fall, the days are short and in late afternoon and evening the cooling coastal eddy moves inland. This was documented during the 1977 Topanga Fire, the 1978 Mandeville Fire, and the 1993 Old



Figure 6 – Point Dume (Google Map)



Figure 7 – Santa Monica Mountains: Fire over 100 acres 1921-43



Figure 8 – Santa Monica Mountains: Fire over 100 acres 1944-61



Figure 9 – Santa Monica Mountains: Fire over 100 acres 1962-78



Figure 10 - Santa Monica Mountains: Fire over 100 acres 1979-1996

Topanga Fire, and apparently also during many other fires that could have impacted the Point Dume area. But what happened to Point Dume during the 2018 Woolsey Fire? It had the smallest fire frequency since fires over a hundred acres were recorded in 1919, being only partially overrun by the 1935 Latigo-Sherwood Fire. The 1956 Newton Fire barely nipped it which prevented the 1958 Liberty Fire from overrunning it. The smaller, 1967 Latigo fire along the coast in front of it was apparently a major reason why the 1970 Wright and 1978 Kanan-Dume Fires stopped short of Point Dume as they advanced onto the 1967 burn. The 1982 Dayton Fire again stopped short of Point Dume.

The 2018 Woolsey Fire approached along a predictable path into and through the Santa Monica Mountains and had Point Dume in focus. The now much more densely populated Point Dume community with largely highly flammable landscape vegetation was a "Sitting Duck." As the fire approached Point Dume, as could be predicted, it showered the area already with firebrands before the firestorm's arrival, and as also predicted, endangered the most vulnerable homes situated above/along draws and in areas where highly flammable landscape vegetation or wood roofs could carry the fire. Needless to say, as could also be expected, many homes burned as people mass-evacuated while homeowners that did not evacuate largely saved their homes. What apparently outraged the community was that out-of-the-area firetrucks were sitting along Pacific Coast Highway without being ordered to respond quickly into the community at this point, as the fire chiefs responsible for their deployment were either unresponsive or perhaps concerned for the safety of their equipment and firefighters as they did not know the area. Fatigue is also of concern during such situations.

Again, the local community was not proactively prepared by the local fire services for such a predictable fire disaster as the fire department itself was not able to understand the apparent design-for-disaster situation and act accordingly. Unfortunately, homeowners, having a new/modern fire station almost at their doorsteps that was also surrounded by potentially highly flammable vegetation, expected too much.



Photos 13, 14 - City of Malibu. Los Angeles County Fire Department Fire Station 71



6. What about the official Los Angeles County Fire Report?

An October 23, 2019 article in the *Los Angeles Times* under the heading Woolsey fire response hurt by poor disaster preparation, lack of firefighters,¹² reviewed the just released report. In reviewing the report, the article states: "*The findings add to concerns raised about how the massive fire was battled. A Times investigation in January found that the first critical hours of the firefight were stymied by communication breakdowns and a scarcity of air tanker support, equipment and firefighters.*"

The *Times* article then highlights the following:

*In over 204 pages, the county report seeks to address many of those lingering questions, as it examines the limits of the regional emergency response, including a lack of fire engines patrolling neighborhoods.

¹² Stiles Matt, Joseph Serra. *Los Angeles Times*. Woolsey fire response hurt by poor disaster preparation, lack of firefighters, report says. October 23, 2019.

*The findings prompted L.A. County Supervisor Janice Hahn, who chairs the Board of Supervisors, to back a potential effort by county firefighters to ask taxpayers for more money to increase their ranks.

"Woolsey proved that we can't rely on mutual aid from other fire departments," Hahn said. "It has been 20 years since we invested in our fire department, and it is about time we get them the resources they need."

*Emergency management officials were unprepared for massive evacuations before the most destructive fire in Los Angeles County history, causing chaos and calls for mutual aid that were not provided in the first critical hours of the Woolsey fire, according to a detailed accounting released Wednesday.

*The long-anticipated report, which will be made public at a hearing Saturday, details a wind-blown blaze of "epic proportions" that overwhelmed the region's emergency response institutions. Agencies were hesitant to offer more help because they had already dispatched firefighters elsewhere or were worried about a blaze breaking out in their backyard.

*The report includes dozens of recommendations to help prepare for future catastrophes — including a clear warning to residents about their role in emergencies.

*"The public has a perception that public agencies can always protect them," the report reads. "As an incident the size of the Woolsey fire shows, this is not always possible."

*While the firefighters found themselves shorthanded, Los Angeles County's emergency management was unprepared.

*Deputies in the field did not have accurate information for evacuating residents or information on those wanting to stay or returning. Outside of Topanga Canyon, there were no detailed plans on which roads would be the best escape routes or how much traffic they could handle.

*There was also no plan for how to convert Pacific Coast Highway into a one-way road, which left a single California Highway Patrol officer to figure it out, the report stated.

*When it came to communicating with the residents, authorities relied too much on Twitter with the expectation the media would do the rest.

*"During the first two days, even when the [Public Information Officers] were physically together, they had no unified strategy for notifications, nor how to divide the workload," the report said. "They all came from large organizations and were used to working in their 'silo' which is not as effective in a large-scale incident."

The statement by Los Angeles County Board of Supervisor chair Janice Hahn is typical of the often still one-sided response of elected officials in protecting the local fire services: give them more money and they could have done a better job. We must acknowledge that a County Supervisor has a rough time to be elected/re-elected if opposed by the firefighters union or if not receiving their endorsement. For example, in response to the devastating 2003 brush fires, state-wide firefighter unions strongly supported four bills that would have provided more firefighters and equipment and was supposed to control/reduce/largely eliminate such devastating brush fires. However, Governor Schwarzenegger, already at the beginning of his first term in office, vetoed them as being too expensive and not solving/addressing the problem.

We must wake up to the fact and finally acknowledge that there will never be enough firefighters to protect individual homes during wind-driven wildfires.

If we do, we would then have to acknowledge that hundreds of homes could have been saved in the Woolsey Fire if:

- 1.) the local fire services would have worked more closely and proactively with the local community and homeowners in educating them in creating a more fire-safe environment (not just through brochures but through boots-on-the-ground involvement) while at the same time strongly enforcing the fire codes despite opposition from some homeowners.
- 2.) the local fire services would have fully supported the training/certification of residents to assist them in protecting their homes and community.
- 3.) the fire services would have worked with the police and other public officials to assure that not just the news media (!) but also private, certified firefighters and trained community leaders such as CERTs, can have ready access to fire areas as the wildfire passes.

Community Emergency Response Team (CERT)

The concept of the Community Emergency Response Team program was first developed by the Los Angeles City

Fire Department as major disasters in California underscored/confirmed the need for training civilians to immediately meet such disasters. It was designed as a grassroots initiative and specifically structured so that the local and state program managers have the flexibility to form their programs in the way that best suits their communities. CERT volunteers are trained to respond safely, responsibly, and effectively to emergency situations, but they can also support their communities during non-emergency events as well. There are over 2,700 local CERT programs nationwide, with more than 600,000 individuals trained since CERT became a national program. Since 1993 when this training was made available nationally by FEMA (Federal Emergency Management Agency), communities in 28 states and Puerto Rico have conducted CERT training. FEMA further supports CERT by conducting or sponsoring Train-the-Trainer and Program Manager courses for members of the fire, medical and emergency management community.

So, what happened during the Woolsey Fire to CERT volunteers attempting to respond to emergencies? Properly outfitted and identified with uniforms, helmets and magnetic plates, they nevertheless were prevented from performing their duties during the Woolsey Fire. For example, having the keys for the City of Malibu's six containers with emergency equipment and supplies and being responsible for their distribution if needed, they could not go in and out of the fire area as they were told at the police check points that they would not be permitted to return. In other words, they were treated just like evacuees.

Professionally trained Fire Personnel such as for the USAA Wildfire Response Team

Carroll Wills, the communications director for California Professional Firefighters, a labor union representing rank and file firefighters in California, stated during an interview with the *Los Angeles Times* while the fire was still ongoing that from the standpoint of first responders (the firefighter union), private certified professional firefighters are not viewed as assets to be deployed. They are viewed as a responsibility. Scott McClean, public information officer for CALFIRE on the Woolsey Fire, when asked to further explain why professionally trained personnel such as for the USAA Wildfire Response Program, were not allowed into the fire area (even after the firefront had moved through) with the subsequent result of the burning of affected homes, he also clearly stated that it is CALFIRE's policy to not allow them in when there is an evacuation order for the area the house is in. He further explained that CALFIRE considers private firefighters to be civilian regardless of the firefighting experience and training they may have.

No wonder that more and more homes are continuing to be lost in wildland fires. This is very disconcerting and reminds us again of the strong power of the firefighter unions in "protecting their turf," such as was done in their attempts to ground the Superscoopers during the 1970s-1980s.

During the November 2, 1993 Old Topanga Fire in Malibu, a homeowner who refused to evacuate drove up to three fire chiefs (white shirts, gold badges) assembled at an intersection and evaluating their options in an unfamiliar area with the firefront and firebrands breathing down on them and a limited water supply. One of the chiefs asked him "What roof do you have." He answered "Rock roof." "What house" He answered "Stucco." "Clearance?" "Good all-around clearance with ice plant slopes." The chief then answered "You will get a truck, and radioed for a fire truck. The firefighters did not have to roll out their hoses on the house as it had been maintained fire-safe with no flammable materials that could catch it on fire even from firebrands as surrounding houses ignited. The house was also surrounded with water-filled trash cans with rags (use rags on sticks/poles, if necessary, to reach the eaves), and firefighters did not have to roll out their house nor use any of their precious truck water to save it.

The key to reducing the ever-accelerating home losses is still being proactively prepared through an open, honest and cooperative effort between fire agencies, public officials and homeowners before the predictable fire strikes and when it endangers the community.