



PHPA Members vs. Devastating Wildfires

During what turned into one of the most destructive fire seasons on record, PHPA members were fully engaged in fire suppression efforts from the air while continuing to educate the public as to the critical benefits of helicopters in public safety.

L.A. County Fire Department's Newest Weapon Against Wildfires

By Lee Benson, Senior Pilot & PHPA Member

The Los Angeles County Fire Department has completed its first full fire season operating two new Firehawk aircraft, and it was a memorable year. Rainfall in Los Angeles County in late 2001 into 2002 was much lower than usual, creating severe fire conditions in the County. By early winter, only a few inches of rain had fallen. I fought a brush fire in February 2002 for the first time in 22 years of flying with Los Angeles County Fire Department. I guess that should have been a clue as to what was about to come as we put two Sikorsky aircraft to the test.

THE AIRCRAFT:

For those who are not familiar with the Firehawk, a brief description is in order. A "Firehawk" is an L model Blackhawk, with two 1,890 SHP GE 701C engines, and a gross external weight of 23,500

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PHPA Hosts Annual Helicopter Awareness Day at Los Alamitos

By James Paules - PHPA Board Member

Our seasonal Santa Ana winds and devastating wildfires took center stage this year at PHPA's Helicopter Awareness Day on Sunday, October 26th at the Los Alamitos Joint Force Training Base.



The number of aircraft for static display was reduced significantly this year as many previously scheduled aircraft were re-directed into the fight against the fires that ranged from San Diego to Simi Valley. In addition to aircraft fighting the fires, several of the participants had to turn back to their base after smoke and ashes during the day of the event turned flight conditions hazardous.

pounds. Our Firehawks have an empty weight of 13,000 pounds. The aircraft was raised 20 inches higher so that we could add a water drop tank. The tank features a retractable soft snorkel, which will fill to its 1,000-gallon capacity in about 50 seconds. The retractable snorkel allows the Firehawk to operate to a V.N.E of 155 knots while it is in the stowed position. The tank has a constant flow design. The pilot can vary the density of water delivered to a given area, using the water tank's computer to select from eight different coverage levels. Beyond its firefighting capabilities, the Firehawk also features a full medical interior and an external hoist. The aircraft is equipped with rapidly deployable, roof-stowed seating which allows the aircraft to transition from a search and rescue mode to carrying 13-man fire crews in just five minutes. LA County's Firehawks also include EFIS, Seahawk AFCS with hands-off hover hold, approach and departure, TCAS and a rotor brake.

WHY A FIREHAWK?

The idea for using a Blackhawk airframe in fire and rescue operations struck during the 1993 Topanga Fire in Malibu, California. This fire blackened some 16,500 acres and destroyed 450 homes, making it one of the most destructive fires in Los Angeles County history. Fellow pilots Rick Cearley, Bob Dunbar, and I, each flew 23 plus hours during the first 36 hours of this fire. We were flying Bell -412s and -205s, which, under the conditions of 45-knot winds and humidity below five percent was like trying to frame a house with a finishing hammer. One thing was clear: the Department needed a bigger hammer to gain the upper hand on wind-driven fires.

In February 1994, at the H.A.I. Convention in Las Vegas, Howard Whitfield of Sikorsky Aircraft and I sat down over dinner and drew some concepts on a napkin about how a bigger aircraft might work. From that evening until December 2000, Sikorsky

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Even base Blackhawk's scheduled for a Para jump demo were hastily pressed into fire fighting service - see photo below courtesy of Morris Cohen.



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Determined not to let the weather gods dampen spirits (or health) the Base distributed face masks to filter out the smoke – see vendors below. Also, PHPA members did brave the elements to show residents that value of helicopters in the community. Our participants included:

- Arizona National Guard – Western Army Aviation Training Center with their Boeing AH-64 Apache Gunship.
- LASD – Aero Bureau with their AIR 5 Rescue ship and their new AS 350 A Star patrol ship.
- Long Beach PD
- Newport Beach / ASTREA
- US Coast Guard – Air Station Los Angeles
- Boeing Corporate Flight Ops and many more



We'll see all of you next year !!

President's Message

By PHPA President Jim Woodaman

The month of October was an extraordinary one even by California standards. For a State where natural disasters are not uncommon, the Santa Ana winds of October 2003 brought with them wild land fires and the loss of property of unprecedented scale. As to be expected, helicopters and our members were in the forefront of every facet of the total effort from the very beginning to the very end.

On the front lines were the State, County and City Fire Department Air Units, our same members we see at our General Membership Meetings and at the annual HAD's, as well as the commercial operators whose helicopters are the fleet of the U.S. Forest Service and Bureau of Land Management. Local Law Enforcement Air Units were also there supporting the fire fighting effort. Media helicopters flew long hours, sometimes 17 or 18 flight hours a day, covering major incidents from Ventura to San Diego. Before the fires were out utility company helicopters and other vendor aircraft were working to assess damage, rebuild circuits and restore power to effected communities.

We should all be proud of each other and the level of professionalism and commitment shown by PHPA members during this crisis. On a personal note I would like to mention the efforts of your Board Member Jim Davidson. This is Jim's second tour as a PHPA Board Member. He is a pilot for the Orange County Fire Authority and was a victim of the Old/Grand Prix fire, losing his home in Crestline while he was working to save the homes of others. I want to thank Jim and the rest of our Members for the service they provided to the public and the difference they made.

Fly Safe!

Jim Woodaman

REMINDER ABOUT LOCAL TFR'S

PHPA Board Member Dwight Crosley
LAPD - Air Support Division

A reminder to our members: Due to homeland security concerns, the Federal Aviation Administration (FAA) has placed Temporary Flight Restrictions (TFRs) over certain events when they are occurring. Pursuant to 14 CFR Section 99.7, commencing one hour before the scheduled time of the event until one hour after the end of the event, aircraft operations are prohibited at and below 3,000 feet AGL within a three nautical mile radius of any stadium having the seating capacity of 30,000 or more people in which a Major League Baseball, National Football League, NCAA Division One Football or Major Motor Speedway event is occurring. When obtaining a briefing from Flight Services, the briefer will not tell you if there is an event that may affect your flight. It is up to each pilot to know if there is a scheduled event that maybe occurring in his or her intended flight path. PHPA has provided links to both Dodger and Angel schedules so you may easily obtain that information. Also, remember that the Disneyland TFR is 3,000 feet and below and three miles effective 24 hours a day. Don't jeopardize your certificate by not being informed.

D. Crosley / PHPA Board

A Note of Thanks –

Would you pass along my thanks and appreciation for the great job they did, especially in the Moorpark area. I got to watch them in action at TOO close a range, but their professionalism and skills probably prevented me and my family from becoming one of the statistics and for that I am truly grateful.

Thanks,

Bob Schimelpfening

*Air Traffic Requirements Branch
FAA Western Pacific Region
Provided by Jeff Miller*

and the Los Angeles County Fire Department Air Operations intensely collaborated on changes to the Blackhawk to optimize its potential as a firefighting rescue aircraft. This work included two field tests that looked at issues of single pilot operations, rotor down wash levels, the fit of the aircraft into our infrastructure, hangars, helispots, and others. Additional testing reflected best airspeed and altitude for water drops, the quality of the resultant drop patterns, hoist work, and handling qualities of the aircraft at slow speeds and high gross weights. In short, we evaluated this aircraft for six years.

The Department, with the approval of the Los Angeles County Board of Supervisors, purchased two new helicopters in December 2000. They were sent to Air Methods Corporation in Colorado to be outfitted with radios, medical interiors and custom seating. Next the primer gray Blackhawks were visibly transformed into the Firehawk with a new paint scheme of yellow, black and white at Cheyenne Aero. After being fitted with water tanks by Aero Union Corporation the Firehawks were ready for service in July 2001, but the rest of the fire season proved to be uneventful. We took advantage of the slow time to hone our training and procedures for pilots and crewmembers. Everyone was ready when the dry season began in 2002.

APPLICATION

In general, the fire gurus predict fire danger based on models that take into account temperature, wind conditions, fuel type, humidity, and slope. These variables help predict how difficult the fire will be to suppress. The lesson we learned in early 2002 was that the fire model was under predicting the extreme conditions we faced. While this article is not specifically about the 2002 fire season in Los Angeles County, the severity is mentioned because this particular fire season gave us an extraordinary opportunity to expand our base of knowledge for the Firehawk as a firefighting tool.

Now, I will discuss how the Firehawk has performed

thus far. Please keep in mind, gentle readers, that my opinions are my own. They apply to the firefighting that I have experienced in Southern California.

SINGLE PILOT

The issue of flying the Firehawk single pilot has generated a great deal of interest from a variety of sources. The mission profiles that we encounter include day and night VFR, unaided and NVG night operations. Fire operations include water drops at 70 feet and 70 knots, crew hauls to ridgelines, and some single wheel touchdowns. Rescue work includes scene landings, hoist missions, swift water procedures, offshore flights and rooftop landings. (Our pilots have flown for an average of 25 years with 10,000 hours of flight time.) Normally, we do not encounter much anti-aircraft fire; and none of Los Angeles County is considered hostile territory. With this reference in mind, we find the aircraft to be a very manageable single pilot platform.

RETRACTABLE SNORKEL

Denton Delong, a senior engineer for Sikorsky Aircraft, first proposed a retractable snorkel for the Firehawk. I was sure this would complicate the system yet Delong's thinking was outside of the box, and produced a great idea. The Firehawk's snorkel extends off of a reel in about four seconds, then we fill the tank from about a 12- foot hover. The difference the retract makes is in the high forward airspeeds that the aircraft can accomplish to and from the fire.

The Firehawk's ability to arrive at a hypothetical fire in seven to eight minutes with 1,000 gallons of water, versus the Bell 412 in 10 to 12 minutes with 360 gallons of water to the same hypothetical fire, is a huge difference. Part of this time difference is the Firehawk's ability to hold higher airspeeds than the 412 while climbing over mountains enroute to the fire.

MAINTENANCE

From a maintenance standpoint, the aircraft have been remarkable. We have flown the two aircraft for a total of 1,200 hours as of mid January 2003. The Firehawks have required a 5.5 maintenance man-hour to flight-hour ratio thus far. The components are easily accessed and the aircraft is well regarded by our maintenance staff. The unscheduled proportion of those 5.5 hours has been reasonable and the maintenance is generally predictable.

RESCUE HAWK

Doing rescue work in the Firehawk is a joy for the pilot and crew. The aircraft is fast and spacious. There is no question that the aircraft easily performs with the weight we carry and at the altitudes we fly. The back of the aircraft is well equipped for our missions and the paramedics enjoy the great access that they have to the patients. The Breeze Eastern hoist mounted on the Firehawk will lift 600 pounds. at a rate of 300-350 feet per minute and less time spent hovering while doing hoist work = less exposure.

PERFORMANCE, THY NAME IS FIREHAWK

Now for my peers who flew slicks in Vietnam. I am going to say something you will not believe. The Blackhawk has so much tail rotor authority that it is a non-issue.

During our initial training, Sikorsky assigned two pilot instructors, Chip Washington and Phil Pacini. As part of the training, each of us was instructed to land on top of Mount Baldy, which is at 10,000-ft. elevation. When my turn came, I did as instructed with 2100 pounds of fuel, a 1000-pound tank, and four people on board, all during an 80-degree day. The approach was uneventful. After establishing a hover, Pacini asked me to turn the tail into a 20-knot tailwind. I had reservations, but it proved to be a *piece of cake*. Then he asked that I keep the Nr down to 95 percent and put the tail back into the wind. Against what little good judgment I have, I did as requested and put the tail into the wind again, and again it was a non-event. I

then added power and we departed straight up at five to six hundred feet a minute still at 95 percent Nr. The Firehawk's power is tremendous and performance is excellent.

BELL versus SIKORSKY

No, I am not going to compare our Bell 412s to the Firehawk. That would be an apples and oranges comparison. Both helicopters have distinct advantages. The Blackhawk has an Auxiliary Power Unit (APU) that is started with hydraulic pressure out of a hydraulic accumulator. Once the APU is started, the main engines are started with air pressure generated by the APU. The blades can be held in position until both engines are on line with a rotor brake. The hydraulic system is redundant to a fault. Three separate hydraulic systems (two driven mechanically by the main rotor gear box, one electrically) keep the sticks moving.

A computer controls the stabalitor, or wing, in the back of the aircraft, which features a pilot override on the cyclic stick in case of an error in the system. Every major switch in a Bell is somewhere else in a Blackhawk and you sit too high in the Blackhawk to crane your neck around enough to read them.

In all sincerity, I would like to thank three people for believing in our dream. Chief P. Michael Freeman the Fire Chief of Los Angeles County Fire Department, Lenny Weeks the Firehawk Program Manager and Howard Whitfield both of Sikorsky Aircraft.

What started out as an idea on a napkin, through hard work and people not afraid of thinking outside the box, evolved into the Firehawk - the highest performance, multi-mission, public safety aircraft, in the world today.

Lee Benson
Senior Pilot, LA County Fire Dept – Air Ops

P.H.P.A.

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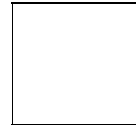
*On behalf of the Board of
Directors we offer our best
wishes to PHPA members
and their families for a safe
and joyous holiday season.*

Please check out the PHPA website

for upcoming calendar

of events for 2004

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